

EXAMINATION NOTE

Fourth Year
First term

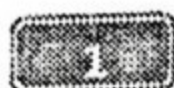
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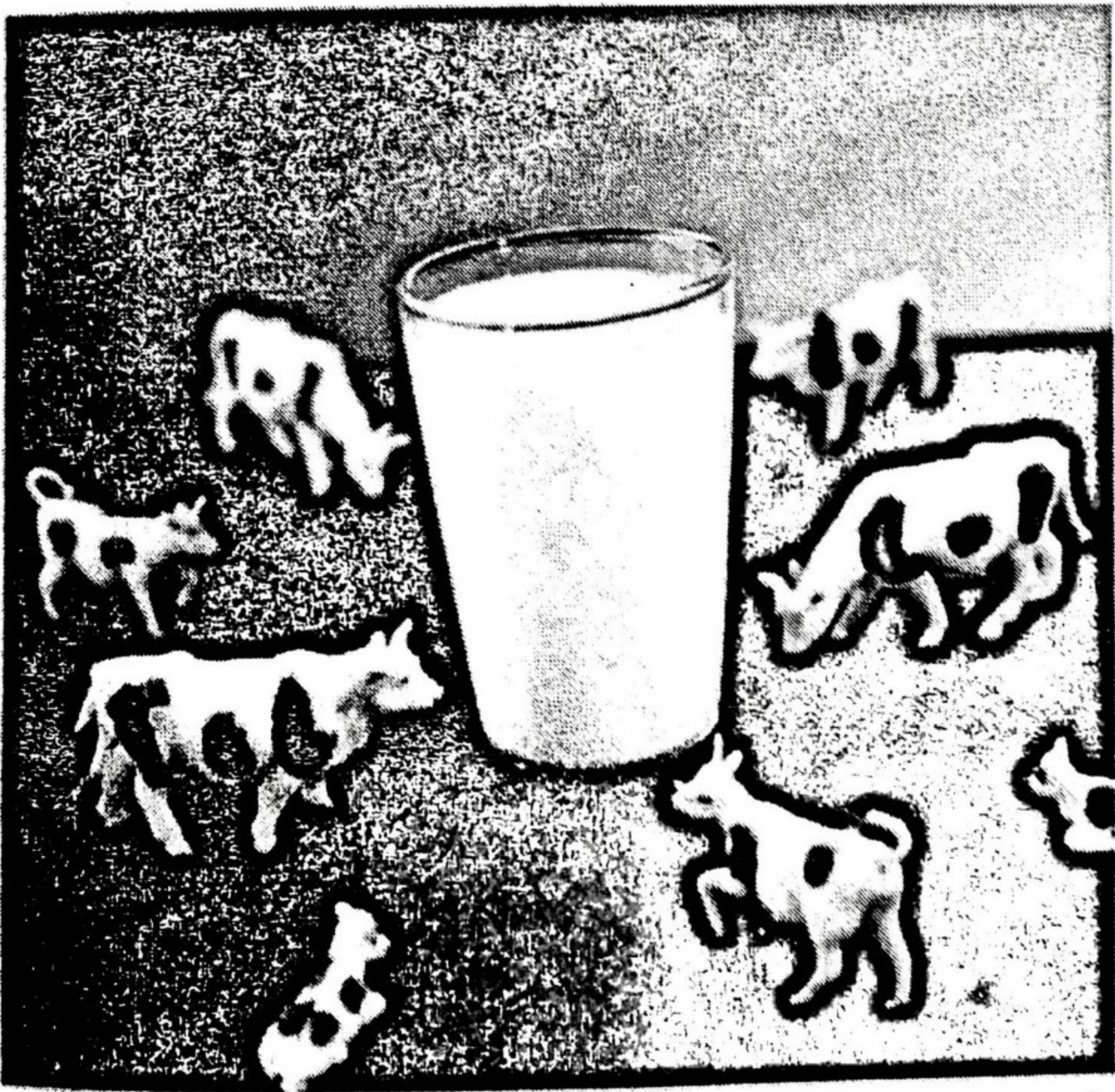
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Milk



Milk Hygiene 2008

Answer the following questions:-

1- Write full account on:

- a) Viral diseases transmitted through milk and to control.
- b) Gassy fermentation in milk
- c) Coliforms in milk and methods of detection.

2- What do you known about:

- a) Mycotoxins contamination of milk.
- b) Control and isolation of the causative agent of mycobacterium tuberculosis.
- c) Intrinsic parameters affecting on microbial growth and discuss fully tow of them.

3- Write about:

- a) Acid detergents and milk stone.
- b) Casein complex and factors affect the stability of casein micelles.
- c) Classification of milk enzymes and how can you detect one of them.

Milk Hygiene 2009

A) Write about :

- 1- Spoilage of milk and mention the spoilage bacteria and their defects in milk..
- 2- The significance of enterococci in raw milk and how can be detected in milk sample .
- 3- A test used for detection of brucella based on milk samples.

B) Write Full account on :

- 1- Sources of contamination of milk with organophosphate and carbamates and your recommendation to avoid milk contamination.
- 2- Extrinsic parameters that govern microbial growth in raw milk.
- 3- Pro and Prebiotic are widely used now for protection human health. Mention Their types and their effects on human health.

C) Write about:

- 1- Important chemical reaction which milk fat participate and the factors influencing fat percentage in milk.
- 2- Prosperities of lactose and its nutritive value.
- 3- Methods applied for sanitizing dairy equipment and steps occur before, during, and after milking as a requirement for sanitary milk production.

Milk Hygiene 2010

A) Give A full account on:

- 1- Casein micelles.
- 2- Lactose.
- 3- Classification of the milk fatty acids.

B) Write about:

- 1- Qualitative detection of the antibiotic residues in milk.
- 2- Indicators of fecal contamination.
- 3- Cold tolerant bacteria.
- 4- Sweet curdling.

C) Comment on:

- 1- A list of zoonotic diseases may be transmitted to humans through consumption of farm milk, besides the characters and behaviour of *Coxiella burnetti*.
- 2- Problems and control of mastitis.
- 3- Udder as a major source of farm milk contamination.

Milk Hygiene 2011

- I-**
- a- Discuss millard reaction (effect on dairy industry and human health).
 - b- Classify enzymes according to their action and importance.

II-Discuss fully:

- a) camel milk as human protection (insulin, Vit C, and antimicrobial agents).
- b) Bovine tuberculosis.

III-What about:

- a) blown cans.
- b) psychrotrophs.
- c) Delvo test.
- d) indicators related to public health hazards.

Milk Hygiene 2012

I- What about:-

- a- Casein micelles.
- b- Nutrient value of lactose.
- c- Rancidity.
- d- Thermotolerant proteolytic bacteria.
- e- Psychotropic lipolytic bacteria.

II- Comment:-

- a- list zoonotic diseases that may be transmitted to consumers through consumption of raw milk. One of those its causative agent characterized by a thick wall and public health hazard (Discuss).
- b- Biological value of camel milk.

III- Give an account on the following:-

- a- Application of lactoperoxidase system (LPS)
- b- Appearance of red color in milk.
- c- A thick mat formation.

Milk Hygiene 2013

1. Discuss briefly:

- a. Applying Good Agriculture Practices (GAP) in milking hygiene to ensuring milk and milk products are safe and suitable for their intended use.
- b. List the milk borne diseases that may be transmitted to consumers through consumption of raw milk and how to guard dairy farm from bovine tuberculosis disease.

2. Write on:

- a. Nutritive value of lactose.
- b. Mention the enzymes present of milk and their importance.
- c. Source of microbial contamination of farm milk.

3. Give an account on:

- a. food borne infection vs. intoxication.
- b. Acid curd vs. sweet curd.

4. Write short notes about::

- a. Platform tests for milk quality.
- b. Camel milk health benefit.
- c. Indicator Bacteria for fecal contamination in milk.

Milk Hygiene 2014

1- Discuss Briefly

- a- Applying good Agriculture Practices (GAP) in feed and water to ensuring milk and milk products are safe and suitable for their intended use.
- b- List the diseases of animal origin that may be transmitted to consumers through consumption of raw milk and how to guard dairy farm from brucellosis.

2- Write short notes on

- a- Milk enzymes and its importance.
- b- Mention in diagrams the alternative concepts of casein micelles formation and the importance of K-casein.
- c- Compare between Galactosemia and lactose intolerance.

3- Give an account on

- a- Microbial food intoxication and fully discuss one of them.
- b- Factors affecting microbial growth in milk.

4- write short notes about

- a- Keeping quality of milk
- b- What happen if take an ordinary sample of milk immediately after milking, an place it in a shallow dish at room temp.(21 to 27° C).

MORBID PATHOLOGY



Colon (sheep) - Enterotoxaemia
Echymoses on the serosal surface

Morbid Pathology 2008

1- mention causes and path gnomonic lesions of the following

- a) circling diseases
- b) caseous lymphadenitis
- c) black head
- d) john's disease

2- how to differentiate between the following

- a) lumpy jaw and wooden tongue
- b) Newcastle and avian influenza
- c) bovine and equine tuberculosis

3- list lesions of the following

- a) acute leptospirosis
- b) dermatophilus congolensis
- c) CRD
- d) mannheimia haemolytica

4- describe the pathogenesis and lesions of

- a) CBPP
- b) black disease

5- I- describe the lesions of the following

- a) strangles
- b) placental lesions in brucellosis

II- mention diseases characterized by lymphangitis and how can you differentiate between them

6- a) name and describe the lesion of mycotic disease causes by

Dimorphic fungi causing cutaneous and pulmonary infection in cat and Man, pulmonary infection in dog and mammary infection in mare .

b) list the forms of colibacillosis in calf and describe the pathogenesis and lesions of the one affect newly born calf (2 day to three weeks) and characterized by high mortality and sever diarrhea .

Morbid Pathology 2009

GROUP I

A) Choose the correct answer:

- 1- Disease characterized by bacteremia are.....
a- Tuberculosis. b- Campylobacteriosis. c- Brucellosis. d- All of them.
- 2- In CBPP, Pulmonary sequestration is resulted from.....
a- Direct effect of toxin. b- Thrombosis of artery. c- Cell mediate immunity.
- 3- The main lesions in anthrax is due to damage in.....
a- Intestinal epithelium b- Alveolar epithelium. c- Endothelial cells.
- 4- In black leg disease, the heart showed endocarditis.
a- Gangrenous. b- Clacified c- Ulcerative endocarditis.
- 5- Braxy is characterized macroscopically by hemorrhage & necrosis in.....
a- Abomasum b-small intestine c- Large intestine d- A&B e- A&C.
- 6- Black disease caused by.....
a- Clostridium novyi. b- Clostridium septicum. c- Clostridium chauvoei.
- 7- In strangles, rupture of retropharyngeal abscess lead to.....
a- Peritoneal abscess b- Lung abscess c- Emphysema.
- 8- Glanders is adisease of.....
a- Young equine. b- Old equine c- Old cattle.
- 9- The main lesions associated with shipping fever in lung is.....pneumonia.
a- Serous b- Fibrinous c- suppurative.
- 10- Mannheimia hemolytica is the cause ofin cattle.
a- Hemorrhagic septicemia b- shipping fever c- listeriosis
- 11- In acute salmonellosis the paratyphoid nodules consist of.....
a- Coagulative necrosis infiltrated with macrophages.
b- Coagulative necrosis infiltrated with neutrophils.
c- Caseous infiltrated with macrophages.
- 12- In paratyphoid, the spleen was enlarged due to.....
a- Proliferation of reticuloendothelial cells. b- Neutrophils c- Esinophils.
- 13- The host defense against brucella infection is.....
a- Humoral immunity b- Cell mediated immunity c- immediate hypersensitivity.
- 14- Anemia associated with leptospirosis is due to.....
a- Autoimmune anemia b- Intravascular hemolysis. c- Extravascular hemolysis.
- 15- In subacute bovine leptospirosis the renal tubules are surrounded with.....
a- Neutrophils b- Lymphocytes c- Plasma cells d- A&B e- B&C
- 16- In nervous form of listeriosis, the brain shows.....
a- Caseous necrosis b- Small abscess c- Coagulative necrosis.
- 17- Actinobacillosis is called woody tongue due to.....
a- Calcification b- Coagulative necrosis c- fibrous tissue proliferation.
- 18- Actinobacillosis affect mainly soft tissue and the tissue reaction is.....
a- Granulomatous b- Pyogranulomatous c- Suppurative
- 19- The form of tuberculosis occurs in serous tissue is called.....
a- Proliferative b- Exudative c- Ulcerative

- 20- The type of enteritis in Johne's disease is.....
 a- Caseous b- Suppurative c- Coagulative d- B&C
- 21- Tubercle nodule in equine is characterized by.....
 a- Rare calcification b- highly cellular c- little connective tissue d- A,B&C
- 22- The type of enteritis in Johne's disease is.....
 a- Chronic catarrhal b- Suppurative c- Fibrinous
- 23- In ILT infection the pathognomonic lesion is presence of.....
 a- ICIB b- INIB c- Both of them
- 24- In Gumboro disease in early stage the bursa is.....
 a- Hemorrhagic b- Caseated c- Atrophied d- A&B e- B&C
- 25- In lymphoid leucosis aggregation of lymphoblast cells occurs in.....of bursa.
 a- Interfollicular b- Intrafollicular c- Epithelium d- Both of A & B

B) Complete the following statements:

- 1- The lesions of toxemia occur through the effect of toxin on &
- 2- The main leukocytes in CBPP is While in shipping fever is
- 3- The anthrax bacilli can escape and resist the immune system through
- 4- The clostridium organisms that induced diseases through tissue invasion are
- 5- The clostridial chauvoeie spores remain dormant in muscle until
- 6- The liver in Bacillary hemoglobinuria is enlarged, friable and showed.....Resemble Infarction.
- 7- The main lesions of struck is.....
- 8- In yellow lamb disease the icterus and anemia is due to
- 9- Campylobacter infection in cattle occurs through But in sheep occurs by.....
- 10- The main lesion in aborted fetus due to campylobacteriosis is.....
- 11- Adenitis equorum is a disease of horse due to infection with and characterized by.....lymphadenitis and rhinitis.
- 12- Botryomycosis is caused by and the tissue reaction is mainly.....
- 13- The inflammatory reaction associated with glanders young nodule is While in late stage the old nodules showed necrosis.
- 14- Farcy is characterized by ulcer connected by lymph vessels and of lymph nodes.
- 15- Enterotoxic colibacillosis occurs in young calves or lambs due to secretion of & Enterotoxin which affect & enzyme.
- 16- In Enterotoxemic colibacillosis the lesions are due to effect of enterotoxin in
- 17- Pasteurella microorganisms produce several toxins particularly leukotoxin that kill bovine&.....
- 18- Infectious abortion in mare caused by And characterized By and Which lead to abortion.
- 19- The main leukocytes in salmonellosis is and the type of necrosis in liver is.....
- 20- The pathognomonic lesions in aborted fetus due to brucellosis are.....
- 21- Abortion due to listeriosis is occurred in quarter due to So the aborted fetus is usually

- 22- Canine leptospirosis caused by& In peracute form the liver showed the characteristic lesions represented by
- 23- *Corynebacterium ovis* causes In sheep which the pathognomonic lesion is.....
- 24- Ulcerative lymphangitis is mainly a disease of and characterized by
- 25- Caseous lymphadenitis is differentiated microscopically from TB by absence of cells.
- 26- The combination of primary focus and lesions in regional lymph node in tuberculosis infection is called
- 27- The inability of phagocytic cells to kill *Mycobacterium* is due to
- 28- Duck plaque is caused mainly by and characteristic lesions are.....
- 29- Epidemic tremors characterized grossly by and microscopically by.....
- 30- Viscerotropic form of new castle disease is characterized by hemorrhages in And necrosis in

GROUP II

A) Describe the pathogenesis of the following:

- 1- Enterotoxic colibacillosis.
- 2- Caseous lymphadenitis.

B) Explain the following statements:

- 1- The cell wall of *Mycobacterium tuberculosis* play an important role in pathogenesis.
- 2- Hemorrhages in different serosal and mucosal surfaces in avian influenza.
- 3- The term ring worm applied to dermatophytosis.
- 4- Absence of hemoglobinuria in cattle infected with anaplasmosis.

GROUP III

A) Write short notes on the following:

- 1- Forms of tuberculous mastitis in cattle.
- 2- General lesions induced by mycotic infection.
- 3- Microscopic picture of Actinomycosis.
- 4- Lesions of brooder pneumonia.

B) Describe the macroscopic picture of the following:

- 1- Gumboro disease.
- 2- Acute phase of canine leptospirosis.
- 3- Johne's disease.
- 4- Shipping fever.

Morbid Pathology 2010

GROUP I

A) Write what you know about the following:

1- Pathogenesis of:

a- Bacillary hemoglobinurea.

b- Shipping fever.

2- Macroscopic picture of:

a- Canine leptospirosis.

b- Ringworm.

c- ILT.

3- Microscopic picture of:

a- John's disease.

b- Tubercle nodule.

c- Gumboro disease.

4- Define the following:

a- Pyemia.

b- gray eye disease

c- Paratyphoid nodule

5- Compare between Marek's and lymphoid leukosis.

GROUP II

A) Complete the following sentence:

- 1- In CBPP, beaded appearance of interlobular septa is due to.....
- 2- Black leg disease is caused by And the infection occurs through in cattle and In sheep.
- 3- Lesions of struck are enteritis with ulceration of the mucosa particularly and
- 4- Strangles affected Age solipeds and caused by and the main leukocytes is
- 5- Two bacterial diseases of equine characterized by suppurative lymphadenitis are and The one affected mainly upper respiratory is called While the attacked lower respiratory called.....
- 6- In septicemic colibacillosis, the infected calf showed and
- 7- The type of necrosis in young tubercle nodule is While in the young glander is.....
- 8- Three bacterial diseases characterized by bacteremia are..... And
- 9- Forms of colibacillosis in animals includes And
- 10- Enterotoxemic colibacillosis is due to proliferation of E.coli in the intestine with production of Toxin, which spread hematogenously leading to and
- 11- Abortion due to Brucellosis in cattle occurs during placenta of second abortion showed extensive The aborted fetus showed.....

- 12- Animals of previously infected, the placenta is not shed due to
- 13- In young nodules of glander, the inflammation in early stage is Later on, (old nodules) the center showed necrosis.
- 14- The necrosis in liver due to salmonellosis is necrosis and the enlargement of spleen and lymph nodes in salmonellosis is due to
- 15- The most affected organ in actinomycosis are and
- 16- The tongue in actinobacillosis is enlarged and hard in consistency due to
- 17- The main leukocytes associated with pasteurellosis is And the type of inflammation is
- 18- The principle lesion in aborted fetus due to listeriosis are.....
- 19- The mechanisms, by which intracellular survival of bacilli of mycobacterium, may be due to, or And
- 20- The type of enteritis according to exudate in John's diseases is.....
- 21- The fungus in tissue can be stained by And
- 22- The forms of Aspergillosis in birds are, and
- 23- When the spherules are ruptured in coccidioidomycosis, the tissue reaction becomes rich in and with few epithelioid cells.
- 24- In Acute aflatoxicosis, toxic hepatitis is In duckling, cats, adult rats, Turkey, chicken and monkeys..... in rabbits, and..... in pigs, dogs, guinea pigs and cattle.
- 25- Petechial hemorrhages, on the mucosa of the proventriculus, may be seen in some poultry diseases such as
- 26- Two poultry diseases characterized by hemorrhagic tracheitis are and, But two diseases characterized by non purulent encephalomyelitis areand.....
- 27- Infected chicken with IB less than 2 weeks of age never become because of
- 28- In ILT, interanuclear inclusion bodies in the tracheal epithelium are seen in and as the infection progress due to necrosis.
- 29- The four syndromes of marek's according to which organ is involved are,, and

GROUP III

A) Choose the correct answer:

- 1- Infectious or non infectious disease limited to a particular area is called
 a- Contagious disease. b- infectious disease. c- Enzootic disease.
- 2- The pulmonary lesions in CBPP is usually
 a- unilateral b- Bilateral c- both of them
- 3- The crepitant sound of hind quarters palpation in black leg is due to
 a- presence of gas b- presence of blood c- presence of fluid.
- 4- Braxy in sheep characterized by
 a- hemorrhagic abomastitis b- hemorrhagic enteritis c- hemorrhagic encephalitis

- 5- Lamb dysentery in sheep characterized by
 a- hemorrhagic abomastitis b- hemorrhagic enteritis c- hemorrhagic encephalitis
- 6- Brucella in cattle caused by
 a- Brucella melitensis b- B. abortus c- B. suis
- 7- The host defense in brucellosis depends mainly upon
 a- Cellular immunity b- humoral immunity c- non specific immunity
- 8- The main leukocytes associated with salmonellosis is
 a- neutrophils b- macrophages c- basophils
- 9- Chronic salmonellosis characterized by
 a- Petechial hemorrhages b- enteritis c- pneumonia
- 10- The type of inflammation associated with pasteurellosis is
 a- Fibrinous b- suppurative c- granulomatous
- 11- The cause of pneumonic pasteurellosis or shipping fever is
 a- Mannheimia hemolytica b- P. multocida c- Both of them
- 12- Listeriosis (nervous form) characterized by microabscess in
 a- Cerebral hemisphere b- eye c- mid brain and brain stem
- 13- In subacute bovine leptospirosis the kidney showed
 a- aggregation of mononuclear cells b- aggregation of polymorph nuclear cells
 c- aggregation of esinophils
- 14- The superficial mycosis characterized by
 a- Classic granuloma b- tumor c- gangrene
- 15- The target organ for aspergillosis in equine is
 a- liver b- guttural pouch c- kidney
- 16- Forms of blastomycosis are
 a- cutaneous b- pulmonary infection in dog c- mammary infection in mare d- all
- 17- Velogenic viscerotropic NDVs cause highly virulent disease characterized
 hemorrhagic lesions
 a- intestine b- liver c- spleen
- 18- The pathognomonic picture of fowl pox is the presence of
 a- ICI body b- INI body c- both
- 19- Leukosis disease is a neoplastic disease of
 a- 4 or more month old chickens b- less than 4 months c- all age
- 20- The neoplastic cell in lymphoid leukosis composed mainly from
 a- B lymphoblast b- T lymphoblast c- Both

Morbid Pathology 2011

Group A

1. Explain the importance of the following in the pathogenesis of diseases:

- a. Mycobacterium cell wall in tuberculosis.
- b. Monocyte-macrophage system in anaplasmosis.

2. Give reasons for:

- a. Splender-hoeppli material in actinobacillosis.
- b. Mannheimia hemolytica affect cattle and sheep only.

3. Describe the macroscopic picture of the following:

- a. Caseous lymphadenitis.
- b. Dermatophilosis.

4. Microscopic picture of the following:

- a. John's disease.
- b. Dermatophytosis.

5. Tabulate the difference between pneumonia in mannheimiosis and mycoplasmosis:

Group B

1. Enumerate bacterial diseases causing septicemia in ruminant animals and mention the pathogenesis and lesions of one of them characterized by nervous manifestation in adult sheep and abortion of the pregnant ewes.

2. Give the reason (s) of the following

- 1- Voluminous diarrhea in calves affecting with colibacellosis.
- 2- Retained placenta in pregnant cows affected with Bang's disease.
- 3- Petechial fever in adenitis equorum disease.
- 4- Tonic spasms in horse affected with lock jaw disease.

Group C

1. List three diseases characterized by grayish necrotic foci on the liver of chickens and describe the lesions of one of them.
2. List the diseases induced petechial hemorrhage in the proventriculus in chickens and describe the lesions associated with orthomyxovirus infection.
3. Write short notes on histoplasmosis in turkey.

Morbid Pathology 2012

Group A

A- Give reason(s) for the following:-

- a- Sequestrum in CBPP.
- b- Anemia in cattle anaplasmosis.
- c- Purpura hemorrhagica as a complication in strangles.
- d- Intractable diarrhea and emaciation in Johns disease.

B- Describe the pathognomonic lesion of the following:-

- a- Over eating disease in lamb.
- b- Aborted fetus due to Bangs disease.
- c- Pseudotuberculosis in sheep.
- d- Exudative form of bovine tuberculosis.
- e- Bovine leptospirosis.
- f- Horner's syndrome.
- g- Acute form of paratyphoid disease.

C- Define the following:-

- a- Pulmonary consolidation.
- b- M cells.
- c- Splendore-Hoeppli material.
- d- Epizootic disease.

D- Complete the following sentence:-

- 1- Delayed hypersensitivity play a key role in pathogenesis of some bacterial disease such as
- 2- Lesions of struck are Enteritis with ulceration of the mucosa particularly and
- 3- Three bacterial diseases characterized by pyogranuloma are
- 4- Two bacterial diseases of equine characterized by suppurative lymphadenitis are and the one affected mainly upper respiratory is called While the attacked lower respiratory called.....

- 5- The main leucocytes play a defensive role in case of Salmonellosis is While in shipping fever is
- 6- The type of necrosis in young tubercle nodule is..... While in the young glander is
- 7- The most powerful virulent factor produced by Arcanobacterium pyogenes is.....
- 8- Nervous form of listeriosis is characterized by walking of animal in circle due to
- 9- Mycotic abortion caused by.....and.....
- 10- Aflatoxins are highly and Metabolites produced by some strains of.....
- 11- Ectothrix arthrospores are seen in skin affected with.....
- 12- Classic granulomata are seen with deep invasive fungi such as.....

Group B

A- Please complete the sentences:-

- 1- Internal organs in case of Mareks disease show..... pattern of enlargement in cases of leucosis.
- 2- Examples of poultry diseases affecting egg production are:
a)..... b)..... c).....
- 3- Fowl pox has two forms: a)..... b).....
- 4- Botulism is caused by..... while quail disease is caused by

B- Please choose the correct answer:-

- 1- Infectious bursal disease virus is lymphotropic virus affecting:
a) T cells. b) B cells. c) NK cells. d) Macrophages.
- 2- An example of poultry diseases associated with nervous manifestation
a) Mareks disease. b) Colibacillosis. c) Thrush. d) Hjarres disease.
- 3- An example of herpes virus infecti on in poultry is
a) Fowl parathyroid. b) Mareks disease.
c) Duck hepatitis. d) Leukosis.
- 4- Microscopical examination of leucosis tumors reveals
a) Uniform population of lymphoblasts.
b) Heterologous population of lymphoblast and lymphocytes .
c) Uniform population of erythroblasts.
d) Uniform population of polymorphunclear cells.

C- Please state if the following sentences are right or wrong and correct as appropriate:-

- 1- The hemorrhagic exudate in upper respiratory passages of poultry is a pathognomonic lesion of CRD.
- 2- causative agents of fowl cholera, *Eimeria necatrix* is a common inhabitant of the large intestine but *Eimeria tenella* infects the renal epithelium.
- 3- Histomoniasis is one of the protozoal diseases, which affects the respiratory system.
- 4- An example of septicemic disease in poultry is arizoniasis caused by *Staphylococcus arizonae*.

Morbid Pathology 2013

Group A

1. Tabulate the differences between tetanus and botulism Neurotoxins.
2. Describe pathogenesis of paratyphoid disease (with illustration).
3. Write what you know about Lawsonia intracellularis.
4. Mention 3 diseases characterized by a pyogranulomatous lesion and formation of sulfur granules then compare the microscopic lesions between them.

5. Complete the following sentence:

1. is a highly contagious fatal disease in calves. The causative agent gets entrance through wounds and cause necrosis at the borders of tongue, cheeks, gum, soft palate pharynx, larynx and tonsils. Removal of necrotic tissue leaves.....
2. Leptospiral septicemia associated with anemia, icterus and hemoglobinuria due to intravascular and liver..... if the animal survive the septicemic phase, the M.O localized in, and.....
3. Mention two diseases caused by clostridium septicum and
4. The pathognomonic lesion in anthrax is.....
5. Mention 3 disease characterized by bacteremia,.....and.....
6. Monocytes play an important role in pathogenesis of.....
7. Sequestrum is characteristic in.....disease and consists of a large area of is resulted from the Of artery branches and surrounded with fibrous tissue.
8. Different forms of bovine colibacillosis include ...,, and
9. Caseous lymphadenitis affects adult.... & the pathognomonic lesion is....

Group B

1. Please complete the sentences:

1. Immunosuppressive diseases of poultry are,,, and
2.disease is clinically characterized by respiratory disorder of infected birds, together with widespread haemorrhage.
3. Infectious uraemia in poultry can be caused by virus.
4. Chick omphalitis can be caused by and.....diseases.

5. Mycotic abortion can be caused by And.....

6. Two clinical types of canadidiasis exist and.....

2. Please choose the correct answer(s):

1. are diseases caused by herpes virus infection.

a. Marek's disease.

b. Gumboro.

c. Infectious laryngeotracheitis.

d. Duck viral hepatitis.

2. is an oncogenic viral disease that can reach peripheral nervous causing paralysis or paresis.

a. Leukosis sarcoma.

b. Marek's disease.

c. Infectious bronchitis.

3. diseases can cause necrotic foci in the liver:

a. Fowl cholera.

b. Gumboro.

c. Fowl paratyphoid.

d. Newcastle.

4. Ochratoxicosis is caused by fungus

a. Penicillium viridicatum.

b. Aspergillus flavus.

c. Claviceps purpurea.

And cause

a. Dry gangrene of extremities.

b. Hepatitis.

c. Nephropathy.

5. Lentogenic strain of Newcastle disease virus causes.....signs in young chicken

a. Respiratory.

b. Digestive & nervous.

c. Respiratory & nervous.

6. While renal coccidiosis is caused by.....

a. Eimeria necatrix.

b. Eimeria tenella.

c. Eimeria truncate.

Black head disease is caused by.....

a. Histomonas meleagridis.

b. Ascardia galli.

c. E.coli.

Morbid Pathology 2014

Group I

A- Describe only the pathognomonic lesions of the following diseases:

- a- black leg disease.
- b- aspergillosis in chicks.
- c- over eating disease in lambs.
- d- contagious bovine pleuropneumonia.

B- Give reason(s) for the following:

- 1- Tonic spasms in horse affected with lock in jaw disease.
- 2- Cause of the black discoloration in black disease in sheep.

Group II

- * mention the difference of tubercle microscopic structure in different animal species
- * difference between canine and bovine leptospirosis.

Fill in the spaces

- 1- The main leukocyte in leptospirosis is while in brucellosis is.....
- 2- The tissue damage in tuberculosis is due to
- 3- Microscopically, the lamina propria of intestine affected with paratuberculosis is.....
- 4- Three bacterial diseases in cattle characterized by bacteremia
- 5- Three bacterial diseases characterized by pyogranulomatous lesion in cattle
- 6- Placenta reaction after the first abortion due to brucellosis in cattle is while the reaction after the second abortion is
- 7- In cattle vibriosis transmitted by..... or..... leading to..... abortion while in sheep the infection occurs through so the abortion is.....

Group III

please complete the following:

- 1- , , and are examples of bacterial virulence factors.
- 2- While caseous lymphadenitis can be seen microscopically as ulcerative lymphangitis causes
- 3- and are forms of enteric colibacillosis, in which and are characterized by toxin release.
- 4- While salmonella pathogenicity island-1 (SPI)-1 is essential for SPI-2 is responsible for
- 5- two major forms of salmonella disease in animals And
- 6- is a main virulence factor of corynebacterium, which causes

Group IV

1- Mention the lesions of the following:

- a- histomoniasis
- c- coccidiosis

b- duck plaque

2- enumerate three diseases characterized by hemorrhage on proventriculus of chicken? And how can differentiate between them grossly?



Please answer all the following questions

الاسئلة في صفحتين

5

Section I

A-Choose the correct answer (s):

-BSE is characterized by:

- a- Presence of papules, vesicles, pustules and crust in the skin.
- b- Spongiform encephalopathy and clinically by pruritis and nervous signs
- c- Development of aggregations of neoplastic cells in any organ.
- d- Transmitted to others by eating contaminated animal feed
- e- Etiology is highly resistant to digestion by proteases.
- f- Long incubation period

- Blue tongue is characterized by:

- a- Long incubation period
- b- Presence of necrotic areas around the mouth and nostrils.
- c- Slowly progressive, fatal neurologic disease
- d- Transmitted to other by blood sucking insect.
- e- Spongiform encephalopathy and clinically by nervous signs.
- f- Hyperemia of the vascular corium, most concentrated at the tips of the dermal papillae in the

tongue

- g- Highly malignant tumor mass and metastasize widely.
- h- Red streaks or red zone in the wall of the sensitive lamella of the hoof.

B- Enumerate the general characteristics of prion diseases.

4

Section II

1- Haemonchosis is a disease caused by.....in sheep. The L3 present in..... While the adult worms present in abomasum resulting in.....

2- The larva of *Strongylus vulgaris* causes thrombus in.....

3- In pulmonary nematodiasis when adult worms, eggs and larvae are present in alveoli the cause is.....

Section III

5

1. Describe the following:

- a- Gross and microscopic lesions due to migration of larvae and adult worms of *Fasciola* in liver
- b- Microscopic picture of *Schistosoma* egg granuloma
- c- Gross and microscopic lesions induced by intestinal coccidiosis.

2-Fill in the spaces:-

- o A-Hyperplasia of reticulo-endothelial organs in trypanosomiasis is caused by.....
- o B-There are three forms of leishmaniasis..... caused by.....,.....caused by..... and ...caused by.....
- o C-Amebic dysentery is characterized by presence of.....in intestinal mucosa and the presence of in liver and brain that consisted of.....necrosis without the presence of.....
- o D -*Bulbiana gigantea* is defined as.....

Section IV

5

1. Describe the lesions of fowl pox.
2. Mention diseases caused by *orthopoxvirus* and *parapoxvirus* and describe the gross and microscopical lesions of sheep pox.
3. Name two vesiculating diseases and their causative agents and mention their associated lesions.
4. Enumerate diseases causing bovine gastrointestinal ulceration or erosion.

Section V

6

A- Complete the following statements:

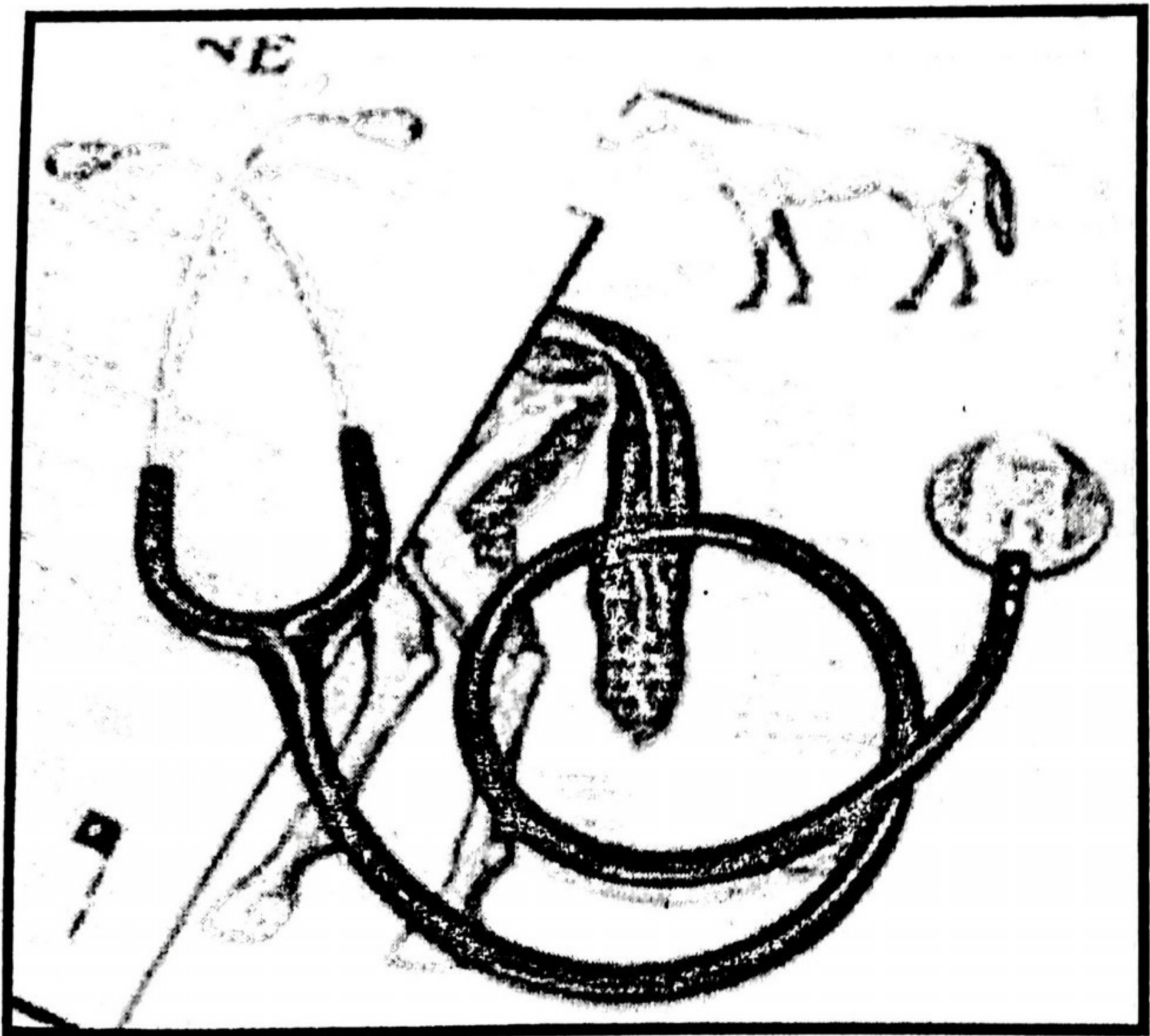
- 1-The pathognomonic lesion in the respiratory form of IBR is ..., and death in this form usually from
- 2-The infectious canine hepatitis characterized by necrosis of and
- 3-The pathognomonic lesion of malignant catarrhal fever is.....
- 4-The characteristic lesion of genital form of IBR in female is..... meanwhile in male is.....but in aborted fetus is.....
- 5-The most important lesions of cysticercosis in sheep include,

B- Choose the correct answer:

- 1-The characteristic lesion of canine distemper in encephalitic form is
A-IN inclusion b- IC inclusion c- Gemistocyte d- Babe's nodule
- 2-The foot pad disease cause of skin at foot pad
a-Erosion b- Hyperplasia c- ulceration d- abscessation
- 3-The characteristic crusts and scabs formation with external parasite is resulted from
a- Parasitic replication b- dermatitis c- hypersensitivity
- 4-Cysticercous bovis elicit in heart
a- Acute inflammation b- Chronic inflammation c-Granulomatous inflammation
d- Zenker's degeneration
- 5-The main complication of Bovine ephemeral fever is
a- Bronchopneumonia b- arthritis c- muscle necrosis
- 6-The negri body in rabied dog present in
a- Purkinje cell b- hippocampus c- medulla oblongata

Good luck

internal Medicine



Group 1

Answer the following questions

Write briefly on:

- a. causes and pathogenesis of dandruff in cattle
- b. epidemiological pattern and risk factors of urolithiasis in fattening steers
- c. classify and interpret the different types of pain .

Group 2

write an account on :

- a. pathogenesis, clinical findings and treatment of urticaria in equines
- b. etiology of eczema in cattle .
- c. types of toxins incriminated in the occurrence of toxemia in farm animals

Group 3

- a. what do you know about general causes and types of anasarca in calves ?
- b. toxic and immunologic insults of renal tissues may result in serious problems .

Describe this sentence and mention the differential diagnosis of the resulting Problems.

Internal Medicine 2009

GROUP ONE:

- A) Describe the sequence of procedures in laying the foundation for differential diagnosis of skin disease.
- B) Tabulate the main difference between each of the following:
 - 1- Embolic nephritis and pyelonephritis.
 - 2- Cystitis and paralysis of the bladder.
- C) Four years old horse was admitted to your clinic with blood pH 7.20 and serum bicarbonate 12 mEq/l.

Please calculate the total base deficit with special focusing on the expected clinical signs, compensatory responses and different effects on normal cell function in such clinical conditions.

GROUP TWO:

- A) A horse had been admitted to your clinic with a complain of skin lesion in the form of steep-sided plaques developed rapidly at regions of flank, back, neck and legs, ranged from 0.5-5 ml in diameter with no exudation or wheeping.

How can you deal with such a case with special reference to differential diagnosis?

- B) A recently calved cow presented to your clinic with a history of frequent painful urination with a passage of a small volume of urine in each urination.

What you suspect, how can you reach accurate diagnosis and what about your lines of treatment?

- C) Classify pain with special reference to its pathophysiologic effects.

Internal Medicine 2010

GROUP ONE:

A) A buffalo admitted to your clinic with sudden appearance of diffuse edema of muzzle, eyelids, conjunctiva and vulvar lips. What are your suspected diagnosis, differential diagnosis and line of treatment?

B) Mark the following statements with correct or incorrect briefly giving only one reason:

- 1- Abomasal disorders in cows are usually accompanied by metabolic acidosis.
- 2- The type of fever in bronchopneumonia is intermittent.
- 3- Estimation of plasma protein and BUN is better than hematological examination for diagnosis of dehydration.
- 4- Oral fluid therapy is indicated for treatment of calves with dehydration during hydration stage

GROUP TWO:

A) A veterinarian is consulted regarding a small dairy herd present with superficial small vesicles surrounded by a zone of erythema, pustules and yellow scab on the udder. What are your suspected diagnosis, differential diagnosis and line of treatment?

B) Write short notes on the following:

- 1- Pathophysiology and types of fever.
- 2- Sudden death.

C) Mention one reason why the following statements are true:

- 1- Chronic interstitial nephritis is accompanied by polyuria and polydypsia.
- 2- Urinary enzymes are a new reliable tool for diagnosis of renal insufficiency.
- 3- The clinical disease associated with urolithiasis depends upon location, size and shape of the calculi.
- 4- Urinary acidifiers are important for prevention of urolithiasis in ruminants.

GROUP THREE:

A) How can you evaluate a fattening steer with ruptured bladder.

B) A 15 year-old draft horse on pasture is observed a veterinarian for a syndrome involving skin and characterized by transitory, edematous swelling which may be itchy (as suggested by patient scratching. What are your suspected diagnosis, differential diagnosis and line of treatment?

Internal Medicine 2011

Group I

A- A buffalo calf admitted to your clinic with sudden appearance of diffuse edema of muzzle, eyelids, conjunctiva, and vulvar lips. What are your suspected diagnosis, differential diagnosis and line of treatment?

B- The formation of urolith in the urinary tract of ruminants and its clinical outcomes depends upon different risk factors. Describe this sentence and mention the clinical findings of this problem.

C- Write short notes on hepatogenous photo sensitization in cattle.

Group II

A- Mention the important mediators that have been implicated in causes of pruritus in farm animals.

B- Write short notes on the following

1. Treatment of urticarial in horses.
2. Differentiation between hyperkeratosis and parakeratosis in buffalo.

C- One month old calf weighed 50 Kg was admitted to your clinic showing high fever which subsides with onset of profuse watery diarrhea with putrefied odor containing blood as well as mucous and fibrinous casts. Moreover, There was also dysentery, severe degree of dehydration (10%), sunken eye, prolonged skin fold test, loss of suckling reflex, signs of abdominal pain and congested mucosa with petechial hemorrhage. Results of arterial blood gas report revealed the following: pH: 7.301, pCO₂: 29.4mmHg, HCO₃: 13 mmol/L, pO₂: 85.1 mmHg, saturated oxygen (SO₂%) : 91, TCO₂: 14.7 mmol/L and base deficit : -12.5.

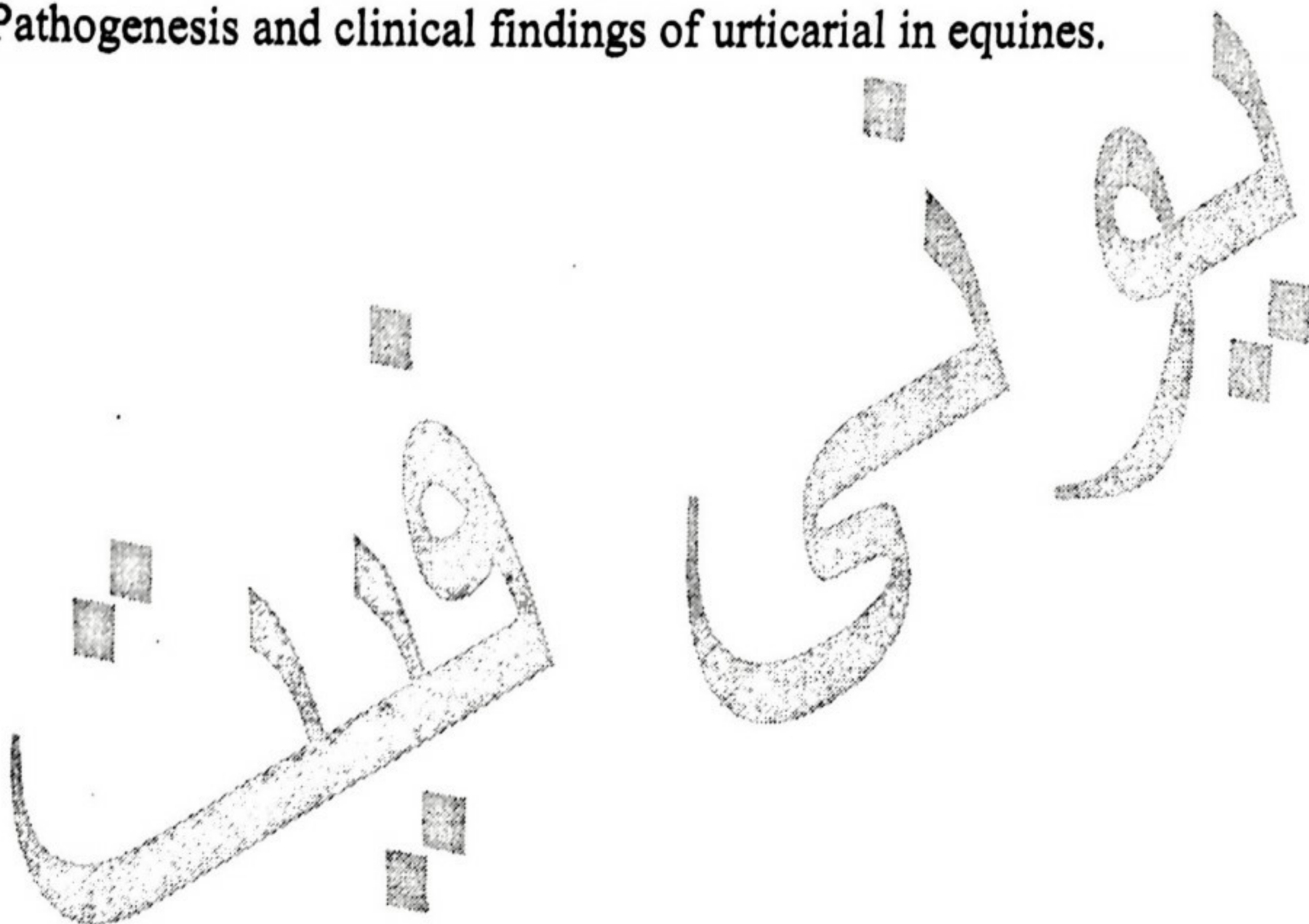
How can you deal with such clinical condition with special focusing on correction of the problem.

Group III

A- A cow presented to your clinic showing pyouria , dysuria and kephosis.
What is yourdiagnosis , differential diagnosis and treatment.

B- Write short notes on:

1. Possible causes of dandruff in cattle.
2. Pathogenesis and clinical findings of urticarial in equines.



Internal Medicine 2012

Group I

- A-** Parakeratosis is the major syndrome in large animal clinical practice. Write on the differential diagnosis of such syndrome.
- B-** Illustrate the causes and clinical findings of hypokalemia in large animals and how can you manage this condition.
- C-** Write briefly on the principles of urinary tract diseases in farm animals.

Group II

A- Write briefly on:

- 1- Clinical findings of urticaria in equines.
- 2- Management of eczema in dogs.

- B-** Six months-old buffalo calf admitted to your clinic showed ventral abdominal swelling detected by ballottement, severe depression, uremia, anorexia, scanty defecation and dehydration. Such calf had signs of colic few days before the development of these findings. Write on your diagnosis, differential diagnosis and handling of such clinical condition?

Group III

- A-** Enumerate the principles of fluid and electrolyte therapy, supporting your answer with the examples.
- B-** How can you manage a case of endotoxemia in new born calf.

Internal Medicine 2013

Group I

- a. A horse was presented in your clinic suffering from sudden development of plaques 0.5 – 5 cm in diameter, with no exudation or weeping, these plaques were found at back, flank region, neck and legs.
* How can you deal with such case and write your line of treatment.
- b. Uremia is a clinical syndrome occurs in the terminal stage of renal insufficiency.
* Write on abnormalities which interact to produce its clinical signs as well as the body compensation.

Group II

- a. A buffalo calf was presented in your clinic with a clinical picture of erythema, papules and vesicles on the back of the animal with weeping of the surface, itching and scratching as well as alopecia, scaling and pachydermia of the skin.
* What disease you suspect and write your line of treatment.
- b. Compare between fever and hyperthermia.

Group III

- a. Write briefly on possible causes of alopecia in farm animals.
- b. Write on principles of treatment of dehydration, electrolytes and acid-base imbalance.
- c. Write on etiology and pathogenesis of acidosis.

Internal Medicine 2014

Group 1

a. A buffalo – calf was presented in your clinic suffering from immediate hypersensitivity and appearance of flat-topped steep – sided plaques with no exudation or weeping . how can you deal and describe the line of treatment.

b. Write short notes on the following :

1. pathogenesis of parakeratosis of skin of cattle .
2. general causes and types of dermatitis in cattle .
3. treatment regime of photosensitization in equines .
4. clinical picture of alopecia in mare.

c. Write a full account about the following :

1. clinico- pathological findings of uremia in dogs.
2. pathophysiology of renal failure in cow.

Group II

a. A post parturient cow presented to your clinic with a history of frequent painful urination showing abdominal colicky pain , mild fluctuating fever , complete anorexia, loss of body weight , and enlarged smooth kidney and cord like ureter on rectal palpation . What do you suspect and what are the prognosis and your line of treatment of such diseased condition?

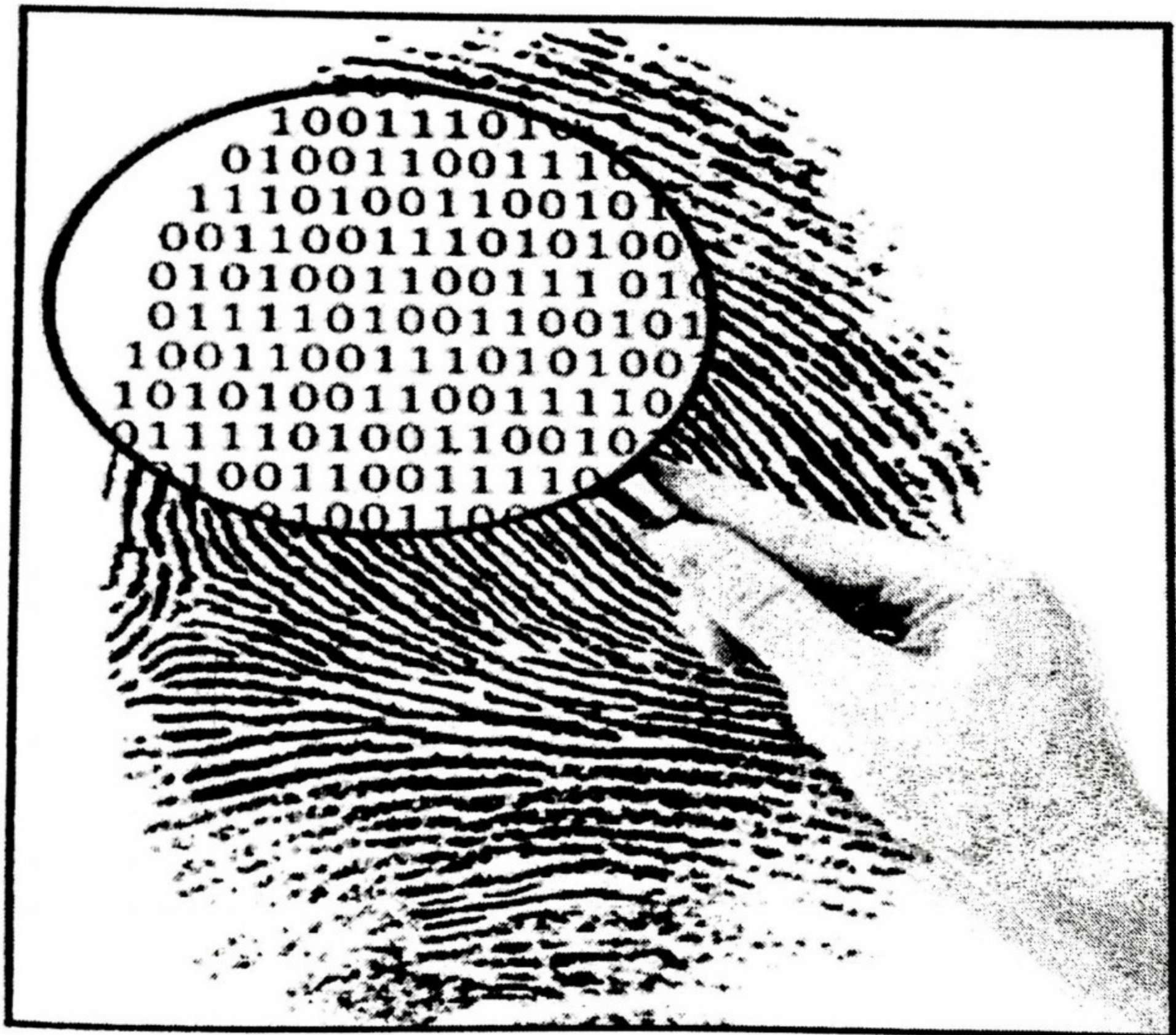
b. 5 weeks old calf weighing 100 kg body weight , presented to your clinic with clinical signs of fever , anorexia, depression , tachycardia, profuse watery diarrhea, congested mucosae with an increased capillary refill time , sunken eyes , skin take seconds to return to normal after its folding and PCV reached 50%.

Write a full prescription for the toxemia associated with this case referring to the amount of fluid and electrolyte therapy needed for rehydration and correction of acid base imbalance of such condition (Note that the ongoing losses were valued to to be 5 liter).

c. Write a brief account about the following :

1. Etiology and pathogenesis of fever.
2. Etiology and pathogenesis of acidemia in different animals.

Forensic Medicine



Forensic Medicine 2009

I- Please answer Three questions from the following:

A) What are the medicolegal importance of:

- 1- Abrasions.
- 2- Inlet and outlet of a bullet.
- 3- DNA examination.

B) Discuss the following:

- 1- Sudden death due to cardiovascular causes.
- 2- Causes of death due to Hanging.
- 3- Post mortem finding in case of asphyxia.

C) What do you know about:

- 1- Methods of adulteration of different Rations.
- 2- Complications of Burns.

D) Mention the causes, time of onset and the site at carcass in case of:

- 1- P M lividity,
- 2- Cadaveric spasm.
- 3- Putrefaction.

II- Please answer this question:

A) Define drowning and discuss how can you confirm the cause of death in a case showing signs of head injuries and submersion in fresh water.

B) What are the methods of criminal abortion induction and its complications.

Forensic Medicine 2010

A) Discuss:

- 1- Causes of death due to burns.
- 2- Smothering.
- 3- P.M. of Violent Asphyxia.
- 4- Cadaveric spasm (site at carcass with examples).
- 5- Adulteration of meat at Slaughter houses.
- 6- Methods and signs of Criminal abortion.
- 7- Factors affecting the rate of putrefaction.
- 8- Causes and Stages of Hyperthermia.
- 9- Ante-mortem and a post-mortem Wound.
- 10- Clinical signs and metabolism in starvation.

B)

- اكتب تقرير طبي شرعة يوضح سبب نفوق حيوان صغير من حيوانات مزرعة تقوم سيادتكم بالاشراف عليها ووجدته داخل حوض مياه الشرب بالمزرعة وحول رقبته حبل طويل - مع ذكر احتمالات سبب النفوق.

Forensic Medicine 20 '11

A) discuss the following:

- 1- Causes of death due to Hanging.
- 2- Post mortem finding in case of true drowning.
- 3- Second flaccidity.

B) What do you know about:

- 1- Methods of adulteration of meat slaughter houses.
- 2- Mention methods of DNA profiling and discuss one of them.

C) What are the medicolegal importance of:

- 1- Ant mortem wound and post mortem wound.
- 2- Petrification.
- 3- Corrosions and scalds.

D)

اكتب التقرير الآتي:

أثناء مطاردة رجال الأمن لأحد عصابات المخدرات حدث تبادل باطلاق الأعيرة النارية و تصادف مرور عربة كارو بها حصان و الذي أصيب ببعض الطلقات النارية في جانبه الأيمن و انحرف الي اليسار بالعربة الكارو داخل المجري المائي العميق.

أكتب تقرير طبي شرعي بعد اجراء الصفة التشريحية له يوضح سبب النفوق الذي تراه سيادتكم .

1- Mention the causes of death in case of:-

- a- Hanging.
- b- Incised wound in the neck.
- c- True Drowning.
- d- Shock.
- e- Sudden death due to respiratory system.

II- What are the medicolegal importance of:-

- a- Identification.
- b- Examination of empty cartridge.
- c- P.M. change in the eye after death.
- d- Putrification.
- e- Cell sexing.

III-

اكتب التقرير الأتي:

نشبت حريق في إحدى مزارع تربية الماشية (انتاج البان) وتسبب عنه حروق ونفوق بعض حيوانات المزرعة وإثناء محاوله الاطفاء حدث نفوق بعض الحيوانات الصغيره من تهدم جزء من سقف المزرعه وايضا غرق بعض الحيوانات الصغيره.

Forensic Medicine 20 '13

Please answer the following questions:

1. Mechanism and medico legal importance of the following:
 - a. Rigor mortis and conditions stimulating it.
 - b. Natural cases which replaced putrefaction.
2. Define and mention the medico legal importance of the following:
 - a. Scar.
 - b. Bevriling.
 - c. Tackes noir.
 - d. Amalogenin gene.
3. Write on the following:
 - a. Tests prove the cessation of circulation.
 - b. Postmortem picture of burns.
 - c. Medico legal importance of DNA profiling and discuss RFLPs.
4. Comment the following:
 - a. Direct causes of death due to wounds.
 - b. Causes of death due to hanging.
 - c. Signs and medico legal importance of criminal abortion.
5. How can you diagnose the cause of death in a heifer showing signs of strangulation and submersed in drinking water container at the farm.

أذكر ما تعرفه عن :

١. طرق الغش التجاري المختلفة التي يلجأ إليها القصابون في المجازر.
٢. طرق اخفاء العرج في الخيول.

Forensic Medicine 20 14

1- What are the causes of death in case of the following cases?

- a. hanging. b. dry drowning. c. large incised wound

2- Write on the following :

- a. postmortem picture of violent asphyxia.
b. medicolegal importance of abrasion.
c. tardious spots and silver spots.

3- Give full account on the following:

- a. causes of sudden death related to respiratory system.
b. methods of criminal abortion.

4- Burns are injuries to tissues that may be caused either by heat or chemicals. How can you differentiate between such injuries, referring to its complications and death causes within first 48 hours?

5- Write on the following:

- a. The external types of putrefaction.
b. Factors affecting the postmortem cooling.

6- Write the scientific name of the following:

- 1- Tiny nodes of chromatin attached to the inner surface of nuclear membrane of neuron of female.
- 2- Permanent landmark identification from embryonic stage till death not changes by age.
- 3- Minute pores in between the papillary ridges of the skin of the finger balls and hands used for identification.
- 4- Product of healing of a wound by fibrosis and cicatrization.
- 5- Gene used to determine sex identity.
- 6- Cut DNA at specific site.
- 7- Change on the eye within 3 hours if remain opening after death.
- 8- Condition replaced rigor mortis occurs at the moment of death.



7- Choose the correct answer between the brackets:

- 1- Finger prints which leaved when person touch mud or waxes called (plastic prints – latent prints- visible prints).
- 2- Finger prints which the ridges makes a backward turn to their course left and right called (arch- loop-whorl).
- 3- Skin pattern of toes and heals called (finger prints-foot prints- muzzle prints).
- 4- One of the following deformities is considering congenital (improper teeth-amputation-dental cavities).
- 5- Short tandem repeats (microsatellite DNA) ranged from (2-6 bp- 100-1000 bp-10-100 bp)
- 6- Artificial mummification called (maceration- embalming- taxidermy).
- 7- Cadaveric spasm occurs in case of (hanging-drowning-choking).
- 8- Adipocere condition replaced (saponification-rigormortis-putrefaction).
- 9- Mummification of cadaver needs (low temperature- high temperature-high moisture).
- 10- The first organ decomposed of the following is (brain – intestine-kidney – liver)
- 11- One of the following organic poisons can resist putrefaction (atropine- alcohol- strychnine- morphine).
- 12- Postmortem lividity colour in case of burns is (dark red- brown red – cherry- red- dark brown).





Mansoura University
Faculty of Veterinary Medicine
Forensic Medicine & Toxicology Department.

Forensic Medicine Examination for 4th year

Date: 12/01/2015

Time allow: 2 hours

Please answer the following questions.

Marks

- | | |
|--|------------|
| 1- Give short account of the medicolegal importance of | (5) |
| a- Abrasion. | (2) |
| b- Colour changes in contusion. | (2) |
| c- Tardieu spots. | (1) |
| 2- Cadaver was extracted from the Nile with a rope around the neck and incised wound at the abdomen. How would the post mortem examination help to find the real cause of death. | (3) |
| 3-Give full account on the following: | (3) |
| a- Skin lesion due to firearm weapon shooting. | (1.5) |
| b- Physical causes of sudden death. | (1.5) |
| 4-Mechanism and medicolegal importance of the following: | (5) |
| a- Livor mortis | (3) |
| b- Mummification . | (1) |
| c- Cadaveric spasm. | (1) |
| 5 | (6) |

A-Give reason

- 1- Teeth and prostate are good tools for identification.
- 2- Amelogenin gene used for sex determination.
- 3- After death infants more cooling than adults.
- 4- Intestine is first organ for decomposition order.
- 5- Non gravid uterus is slower organs of putrefaction.
- 6- Finger prints are accurate 100% for identification.
- 7- Putrefaction is slow in case of drowning.

B-Complete the following

- 1- PMI = -----
- 2- Pathologists defined death as -----
- 3- The period between somatic and cellular death called ----- and allow -----
- 4- EcoR1 cuts DNA at sequences -----
- 5- The vast majority of fingerprints that law enforcement officers deal with-----
- 6- A scar over antecubital region or dorsum of the hand may be clue about -----

← أنظر خلفه

- 7- Typical PCR reaction-----
8- Microsatellite DNA called----- and its repeat unit ranged from - bp.

C- Write the Scientific name

- 1- Newly method adopted for identification of animals especially equines and cattle.
- 2- Enzyme produced by clostridium welchii during putrefaction.
- 3- Usually taken in certain maternity hospital to identify newborn infant.
- 4- Short single strand of DNA used in PCR.
- 5- Type of prints containing five pattern as diamond grooves.
- 6- Containing blood vessel patterns may be unique to individuals.
- 7- Technique used by scientists to distinguish between individuals of the same species using only samples of their DNA.
- 8- Projection of chromatid materials present in female polymorphnuclear cell.
- 9- Techniques used for separation of DNA by its size.

6- _____ (3)

A- Give short account on:

(1.5)

- Local and systemic responses against burn injury.

B- Choose the correct answer:

(1.5)

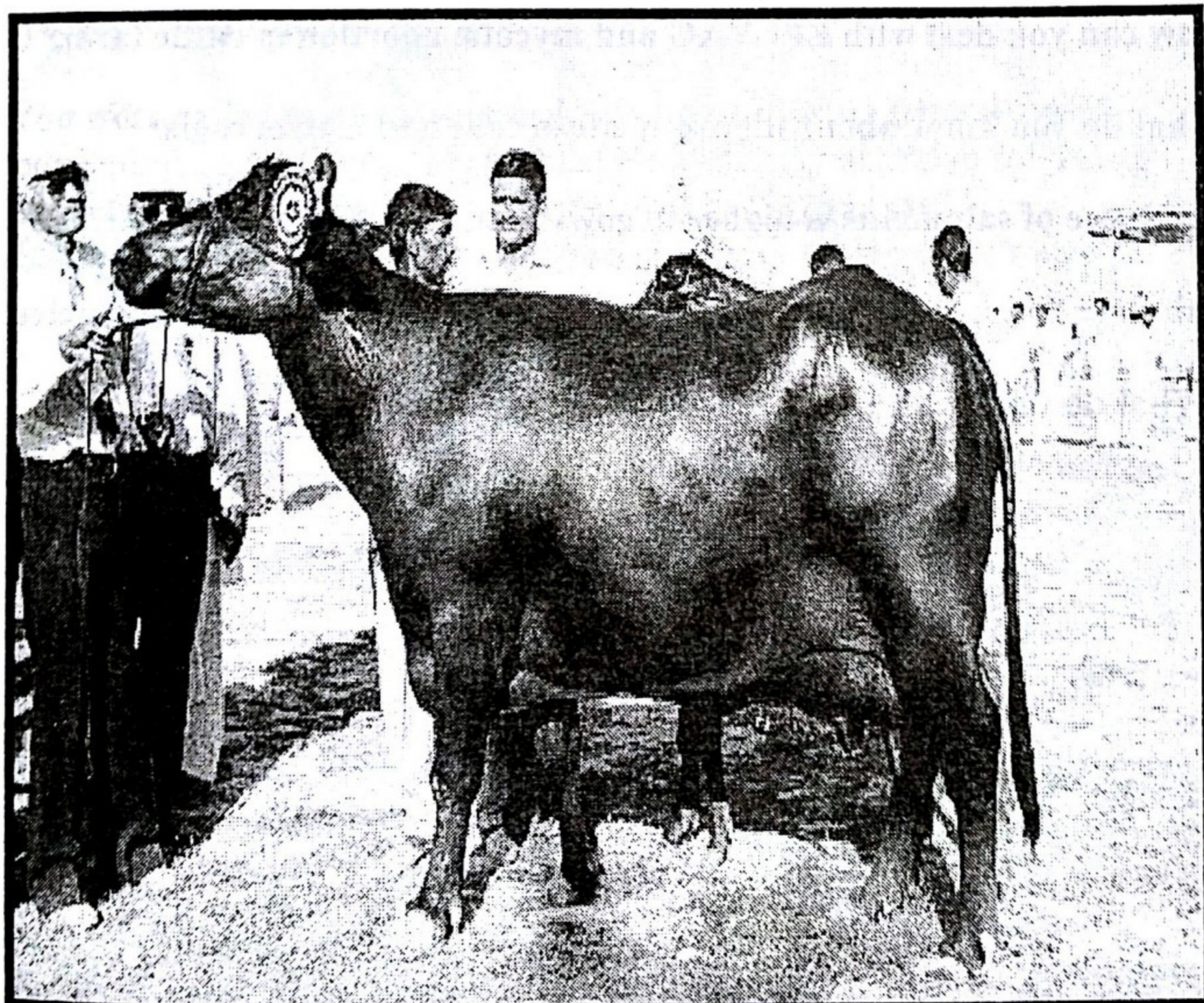
- 1- (Pain – Soot – Charring – Heamoconcentration) is a sign that indicates the burn is not full thickness.
- 2- A deep partial thickness burn means an injury of (epidermis – epidermis and most of dermis – epidermis and the upper layer of dermis – all skin layers).
- 3- The following steps are not recommended for first aid of burns except (application of iced water – cover the burn with a piece of cotton - cover the burn with a plastic bandage – application of toothpaste).
- 4- The blood in case of scalds is (viscid – diluted – normal – sticky).
- 5- In Wilson classification, second degree burns characterized by the following except (painful – blistered – dry – red).
- 6- Neurogenic shock is a possible cause of death from burns (within first 6 hours – from 6 to 48 hours – from 2 to 7 days – after one week).

Total Marks

(25)

Good luck

Theriology



Theriogenology 2009

A) Please answer the following questions:

- 1- What are the origin and field of PGF2 α .**
- 2- Mention the age of puberty and sexual maturity in different animal species.**
- 3- Breeding time differ from animal to another. Discuss.**
- 4- How ovulation occurs in cows.**
- 5- Spontaneous recovery can't be expected in bulls affected with campylobacteriosis. Explain.**
- 6- How can you deal with EPI-VAG and mycotic abortion in cattle farm.**
- 7- What do you know about stigma, medusa cells and metrorragia.**
- 8- Incidence of salpingitis is higher in cows than mares. Why?**
- 9- Tabulate the accessory genital organs of male in different animal species.**
- 10- What do you know about reaction time and abnormal mounting?**

Theriogenology 2010

A) Give an account on:

- 1- The endocrine mechanism and factors affecting the age of puberty?
Mention the age of puberty and sexual maturity in different animals.
- 2- The endocrine controlling of estrous cycle.
- 3- Functions of granulose cells.

B) Write short notes on Four from the following:

- 1- Functions of epididymis.
- 2- Sexual desire in bull.
- 3- Role of LH in ovulation.
- 4- Estrogen hormone.
- 5- Process of fertilization.

- C) You were called to examine a herd of cows suffering from drop of conception, disturbance of estrus cycle and early abortion following introduction of a new bull to the herd. What is the case?
State methods of diagnosis and control in both male and female.

Theriogenology 2011

Please answer the following questions:

1-Give an account on:

- a- non pituitary gonadotropins.
- b- salmonellosis in equine.
- c- Role of granulosa cells in ovulation.

2- Write short notes on:

- a- Zonareaction, vitelline reaction and cortical granules.
- b- Classification of estrous cycle according to both frequency and duration.
- c- Enumerate the factors affecting sperm transportation inside the male genital tract.

3- Give brief account on:

- a- The origin, site of action and field uses of PGF₂ α , GnRH and oxytocin.
- b- Sexual desire (include definition, measurement and factors affecting it).

4-

- a- Compare among cow, mare, ewe, sow and bitch in their estrous cycle length, estrus phase, type and time of ovulation and suitable time of breeding.
- b- You were called to examine a herd of cows suffering from storm of abortion following introduction of new cows to the herd. What is the case? State methods of diagnosis and control.

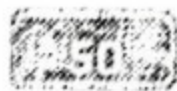
Theriogenology 2012

Please answer the following:-

- 1- Puberty is the age at which the male or female gonad becomes capable of releasing gametes and reproduction may occur. Discuss the endocrine events and factors affecting puberty.
- 2- Bovine trichomoniasis is a contagious venereal disease caused by trichomonas foetus and characterized by infertility, early abortion and pyometra. **How can you manage such problem in a farm?**
- 3- Discuss therapeutic uses of **progesterone and PGF2 alpha** in farm animals.
- 4- Describe changes of genitalia in a pluriparous cow during different phase of estrous cycle.
- 5- Give short notes about different forms of **IBR** in dairy farm.
- 6- Describe fully mechanism of **erection and ejaculation**.

Theriogenology 2013

1. Sexual differentiation proceeds in consecutive steps. Discuss fully.
2. What do you know about CONTAGIOUS EQUINE ABORTION?
3. Mention the biological sources and therapeutic uses of pituitary Gonadotropins in Farm animals.
4. Synchronization of oestrous is an important protocol used in farm animals. Discuss fully.
5. Give short notes on factors affecting fertilization.
6. Enumerate abnormalities of holding and mounting.
7. Discuss symptoms and control of Infectious enzootic hepatitis.



Theriogenology 2014

1- Discuss briefly the following points :

- a- Types of sex ratio.
- b- Morphological sex.
- c- Sexual behavior in dog.
- d- A chromosomal reaction and sperm penetration.

2- Illustrate only with drawing:

- a- Regulation of reproductive hormones secretion in male.
- b- Two cell two gonadotropins model of follicular cell estrogen secretion.
- c- Hormonal changes during estrous cycle in canine.
- d- Follicular waves in cattle.

3- Write what do you know about ovulation synchronization - scheduled AI without estrous ovsynch

(please do not forget to illustrate your answer by 21 D estrous table and the treatment begins at Saturday).

4- Male factor plays an important role in some disease causing abortion in cows. Please mention one bacterial and other protozoal disease and how can you differentiate bet.them and describe the controlling procedures for only one.



Please answer the following Questions

1- **Define** the following terms; **(5 Marks)**

- | | |
|---------------------------------|-------------------------------------|
| a) Müllerian inhibiting hormone | b) Gubernaculum |
| c) PRID | d) Two cell, two gonadotropin model |
| e) CVE virus | f) Paratyphoid abortion |

2- **Only enumerate**; **(5 Marks)**

- a) Factors facilitating fertilization.
- b) Factors affecting estrus.
- c) Venereal diseases causing abortion in cattle.

3- **Summarize** the following. **(5 Marks)**

- a) Process of ovulation.
- b) Process of fertilization

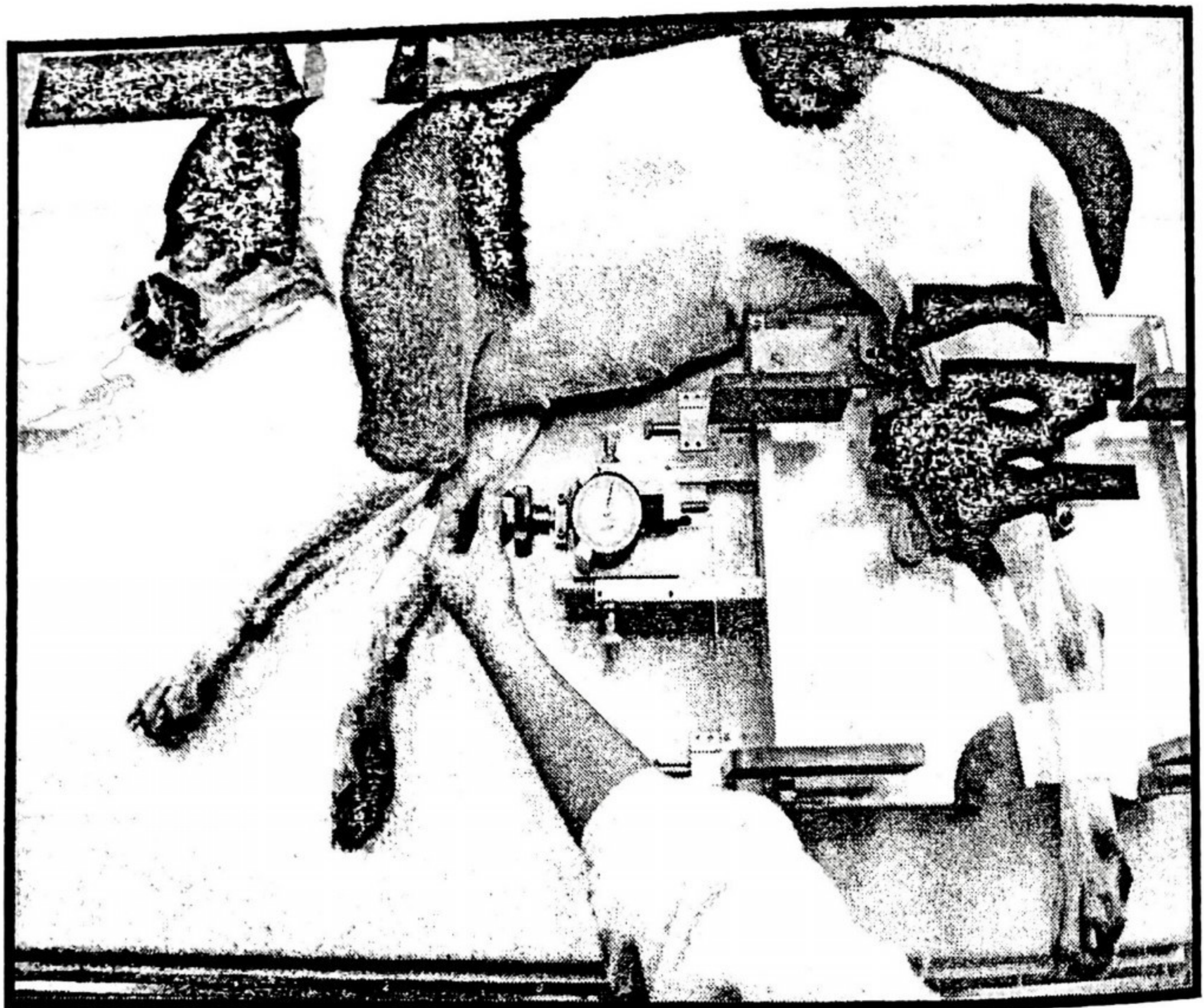
4- **Discuss** the following **(5 Marks)**

- a) Hormonal control of estrous cycle.
- b) Non-pituitary gonadotropins.

5- You have been called to a dairy farm. The farm manager complaint was the increased number of services per conception, repeated breeder with prolonged estrous cycle and some cases have been aborted at the mid-term of gestation. During the discussion, the manager mentioned that a new sire have been introduced to the farm 7 months ago. **How to reach a final diagnosis and how to interfere with this situation?** **(5 Marks)**

With my best wishes
Prof. Dr. Samy Zaabel

Anesthesiology



Anesthesiology 2009

A) List the important items for each of the following:

- 1- Practical measures that can be taken to avoid the challenges and problems during exotic animal anesthesia.
- 2- Factors affecting selections of anesthetic methods.
- 3- Clinical criteria to assess pain and distress in laboratory animals.
- 4- Non wasteful and non polluting anesthetic breathing circuits.
- 5- Causes of hypothermia and how to avoid it during rabbits anesthesia.

B) Briefly state and justify how anesthesia can best be achieved during the following surgical procedures:

- 1- Pedal bone sequestrum removal in a cow.
- 2- Left flank C-Section in a buffalo.
- 3- Wound closures in upper lip in a she donkey.
- 4- Castration in a tom cat.
- 5- Tail amputation in 2 months old puppy.

C) Discuss fully the relationship between epidural analgesia and autonomic nervous system in cattle.

D) Discuss the role of local analgesia in the diagnosis of foot pain in the horse.

E) Ketamine Hcl is a unique drug. What do you know about its mode of action, behavioral effect, metabolism and its clinical uses.



Anesthesiology 2010

- A) A puppy weighting 5Kg on which you are about to perform elective surgery under general anesthesia suffers a sudden respiratory arrest straight after anesthetic induction. Briefly discuss the used protocol and actions that you would take to both diagnose and treat this problem.
- B) Enumerate the differences in veterinary care when applied to Zoo/Wild/Exotic animals in confinement and free-ranging species as compared to domestic animal during designing a protocol anesthesia.
- C) List the clinical uses, advantages, disadvantages and situation should be avoided of α_2 adreno receptor agonist.
- D) Why do we pre medicate animals? What are the clinical uses of opoid analgesic drugs
- E) Write short notes on:
- 1- Local anesthetic techniques that are applicable to equine in standing surgery.
 - 2- Recommended anesthesia for medial fore claw amputation in a (400Kg) cow.
 - 3- Recommended anesthesia for surgical removal of cutaneous form of equine pythiosis at the ventral abdominal wall in (350Kg) mare.

Anesthesiology 2011

1- The use of laboratory animals require anesthesia to provide immobility and analgesia , not only for ethical reasons but also because pain and stress can alter the quality of research results , so it is wise to select the agent and techniques .

- a- What are the ethics for care and use of experimental animals with special references to the 3 Rs.
- b- What are the alternatives for using laboratory animals in teaching and research ?
- c- What are problems with laboratory animal anesthesia?
- d- How to plan for pain relief before operation?
- e- What are the most common used analgesic drugs and techniques?

2- Please write short notes on the indications, advantages and clinical applications of TIVA.

3- Why and how the following statement are true.

- a- Xylazine Hcl is frequently used in practice and described as a Unique drug.
- b- The role of pre-anesthetic medications cannot be neglected.
- c- Anterior epidural are not preferable in equines.

4- Please tabulate recommended analgesia / anesthesia for the following situation.

- a- Amputation of fore teats in a pregnant cow (recumbent position).
- b- Surgical removal of mammary gland (mastectomy) in castrated cat.
- c- Right flank laparotomy in a buffalo (standing position).
- d- Eye examination in 400 Kg unco-operative stallion.

Anesthesiology 2012

A- Please answer the following:-

- 1- Illustrate with labeled diagrams the components of closed breathing circuits?
- 2- What are the kinetic considerations of general anesthetic agents?
- 3- Enumerate clinical signs of canister exhaustion during anesthesia?
- 4- What are special concerns and remarks in laboratory animals anesthesia?

B- Write in detail about the technique, used drugs and doses of:-

- 1- Intravenous regional analgesia?
- 2- Two different methods for anesthetizing the left flank of a cow?
- 3- Local anesthetic techniques which could be used in the head of the horse?
- 4- Recommended analgesia for dehorning in goat, teat lacerations in buffalo, and enucleation of eyeball in pregnant cow?

C- List the important items for each of the following:-

- 1- Clinical uses of guaifensin as muscle relaxant drug?
- 2- Alpha 2 adrenoceptor agonists are used for sedative, analgesic, anxiolytic and anesthetic sparing; Please enumerate these drugs, its clinical use in equine anesthesia?
- 3- Differences between epidural and paravertebral analgesia, with special references to indication, advantages and dosage used for epidural opioid analgesia?

Anesthesiology 2013

1. What are the required supplies during the administration of inhalation anesthesia? Illustrate with diagrams the breathing circuits?
2. What are the ethics for care and use of experimental animals with special references to the 3 Rs? What are the alternatives for using laboratory animals in teaching and research? Design two protocols for anesthesia of both swine and rabbits ?
3. Please design a table for comparisons of epidural analgesia in domestic animals? With special references to the site of injection, methods of injection, drugs used and dosage, the blocked nerves and subsequent area, complications and contraindications?
4. Enumerates the clinical uses, dosages, situations should by avoided, and combinations with other drugs of each of lidocaine Hcl, butorphanol, guaifenesin, atropine sulphate, ultra short acting non barbiturates and medetomidine HCL?

Anesthesiology 2014

1- madam Naglaa bring her lovely dog on which you are about to perform 90 minutes elective surgery under general anesthesia.

Nagla asked you to answer her about the following questions.

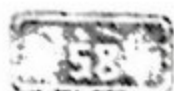
- a- why does my dog have hair clipped on several sites on his legs ?
- b- why do you not want my dog fed before anesthesia ?
- c- what information is needed about my dog before anesthesia?
- d- did you give him medications before anesthesia and why ?
- e- what meant by (patient breathing circuits)pls show me a diagrams ?
- g- what care will my dog receive during anesthesia
- h- what are things can go wrong during anesthesia to my dog ?
- i- How the anesthesia drug act and how it leaves the body ?

2- Dying is nothing , but pain is a very serious matter: in this aspects pls tell us about:

- 1- Why we treat pain in animals?
- 2- Pain management strategies? 3- pain management medications and their clinical uses in general.

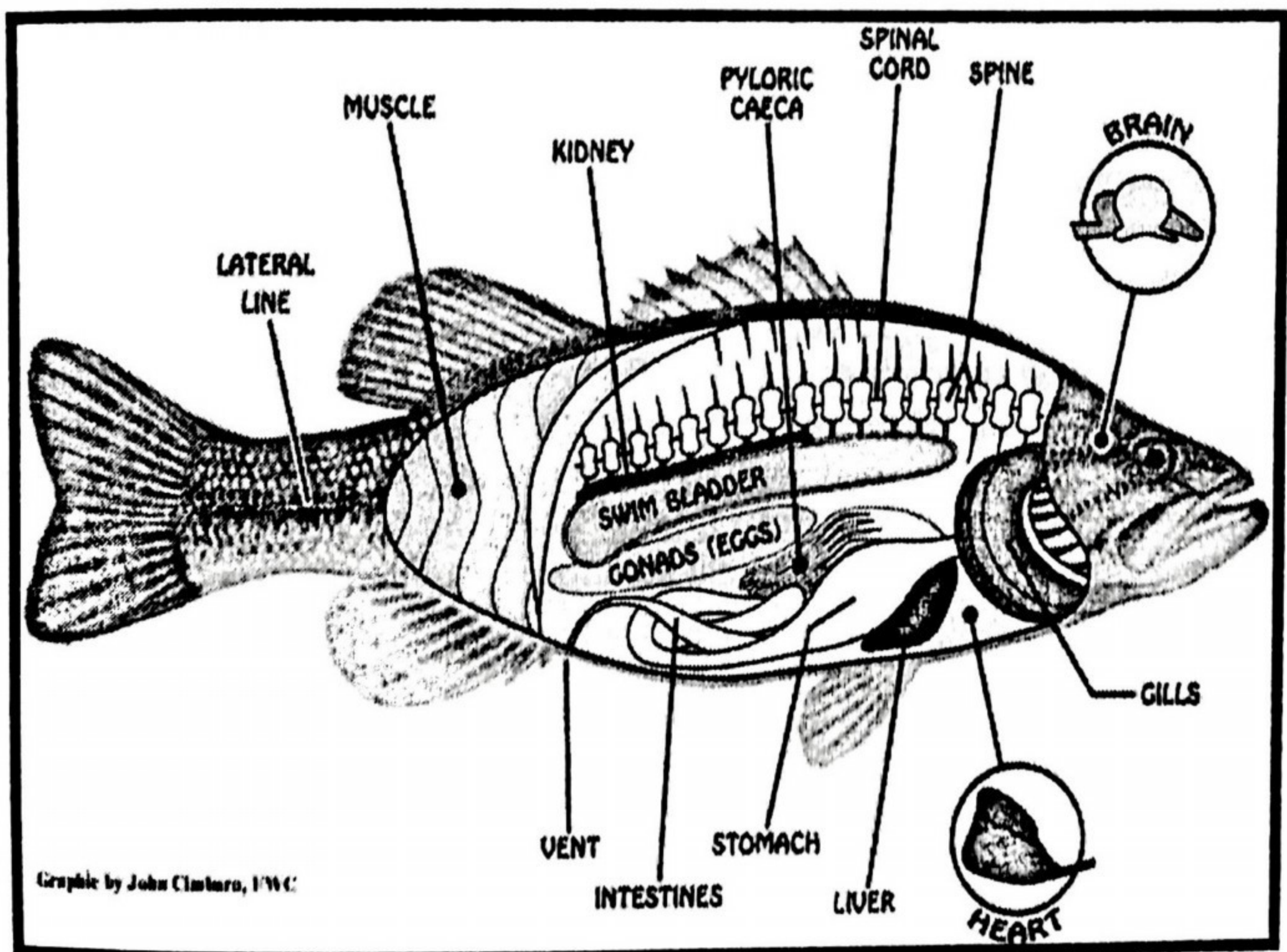
3- please write in table about each of the following

- a- total intravenous anesthesia in equines.
- b- species specific considerations for preanesthetic medications.
- c- clinical uses of lidocaine HCL in domestic animals .
- d- paravertebral analgesia.
- e- special concerns about anesthesia in laboratory animals.



Fish

Management



Fish Management 2009

A) Discuss fully:

- 1- Induction of spawning in African cat fish.
- 2- Advantages of floating cages as a water based farm.
- 3- Transportation of live fish in plastic bags.
- 4- Soil characteristics of earthen pond.

B) Compare between:

- 1- Black tiger shrimp and western white shrimp.
- 2- Productive behavior of Tilapia of the genus tilapia and Tilapia of the genus sarotherodon.
- 3- Semi-intensive and Intensive system of breeding.

C) Rewrite the following sentences and correct the wrong word (s):

- 1- In land-based farms, it is preferable to select land with slope not deeper than 7%.
- 2- Pond turbid water can be reduced by addition of formalin 200 mg/L.
- 3- Collection of large numbers of mullet fries are made after sunning days in summer season.
- 4- Black tiger shrimps are relatively easy ship life without water.
- 5- Oreochromis niloticus substrate breeders and salt tolerant fish.
- 6- Mugil capito are faster grower fish than Mugil cephalus.
- 7- Injection of dried carp pituitary to fish for treatment of bacterial diseases.

D) Tabulate the differences between Extensive, Semi-intensive and Intensive Systems of Marine water shrimp farms (Stocking density – water exchange – fertilization – mechanical aeration – production cycle in days and annual production Kg/ha) .

Fish Management 2010

A) Tabulate the main difference between:

- 1- Black tiger shrimp and western white shrimps.
- 2- *Oreochromis niloticus* and *oreochromis mossambicus*.
- 3- Advantages and disadvantages of semi-intensive and intensive type of breeding.
- 4- Types of aquaculture land soil and their characteristics.

B) Comment on the following:

- 1- Stocking of transported fish.
- 2- Advantages of floating cages.
- 3- How can you design a pond bottom to facilitate drainage and harvesting?
- 4- Inducing spawning in catfish (natural and artificial).

C) How can you solve the following aquaculture problems?

- 1- Turbid water.
- 2- Sandy soil of earthen pond (porosity).
- 3- High level of non-ionized ammonia.
- 4- Off-flavor problem of tilapias.
- 5- Development of filamentous algae in *O. niloticus* monoculture.
- 6- High mortalities in *Mugil cephalus* fries during acclimatization.

Fish Management 2011

1- Comment on:

- Points should be considered before selection of cage site.
- Substrate breeder fish.
- Suitability of African catfish for aquaculture.
- Grow out systems of marine shrimp.
- Black tiger shrimp.

2-

A- How could you solve the following problems:

- Sandy soil used for land-based farms.
- High turbidity of water of pond.
- Over population of fish.

B- Compare between spawning of sea bass and sea bream.

3- Complete the following:

- Culturing of single sp. Of fish called its advantages are ,
- Aims of aquacultures are , ,
- Very large size pond is undesirable due to
- Increase water depth of pond than 1.5 m resulted in ,
- To facilitate water drainage of fish pond bottom should have a slope of %

Fish Management 2012

A-Tabulate the differences between the followings:-

- 1- Black tiger shrimp and Chinese white shrimp.
- 2- Advantages and dis-advantages of fish mono-culture and poly-culture.
- 3- Semi-intensive and intensive type of breeding of marine shrimp.

B- Comments on the following:-

- 1- Tilapia over population.
- 2- Artificial propagation of gray mullet not practiced commercially.
- 3- Mono sex production.
- 4- Induced spawning in sea bass.

C- Mention what do you know about (Illustrate with drawing if needed):-

- 1- Floating cage culture.
- 2- Precautions during fish transportation.
- 3- Advantages of using different carp species in poly-culture.
- 4- Artificial propagation of catfish.

Please answer the following:

1. Discuss the advantages and disadvantages of floating cages?
2. Why some aquaculture owners prefer monoculture breeding?
3. Comment on types of fish ponds and their percentages?

Explain the reason(s) for the followings:

1. Male of catfish have to be killed during artificial propagation?
2. In rectangular pond, the longitudinal axis should be parallel to the prevailing wind?
3. During stocking of transported fish, plastic bags should be placed closed on water surface for 15-20 mints?
4. Width of main dike should not less than 6 meter?
5. Out of season spawning can be done successfully in both sea bass and sea bream?
6. The pond bottom should have a slope of 0.1-0.2 % toward out let?
7. Periodical collection of oreochromis niloticus hatched fries away from parents in cement tank during artificial propagation.
8. Sparaus auratus considered a protandorous hermaphrodite species, while Oreochromis considered synchronous species?

Explain What are the risks on fish health regarding to the followings:

1. Increases of water depth than 3 meter?
2. Increases of water turbidity?
3. Uses of acidic water for aquaculture purpose?

Comment on artificial propagation of Cyprinus carpio.L (Carp fish).



Fish Management 2014

I- Comments on the following:

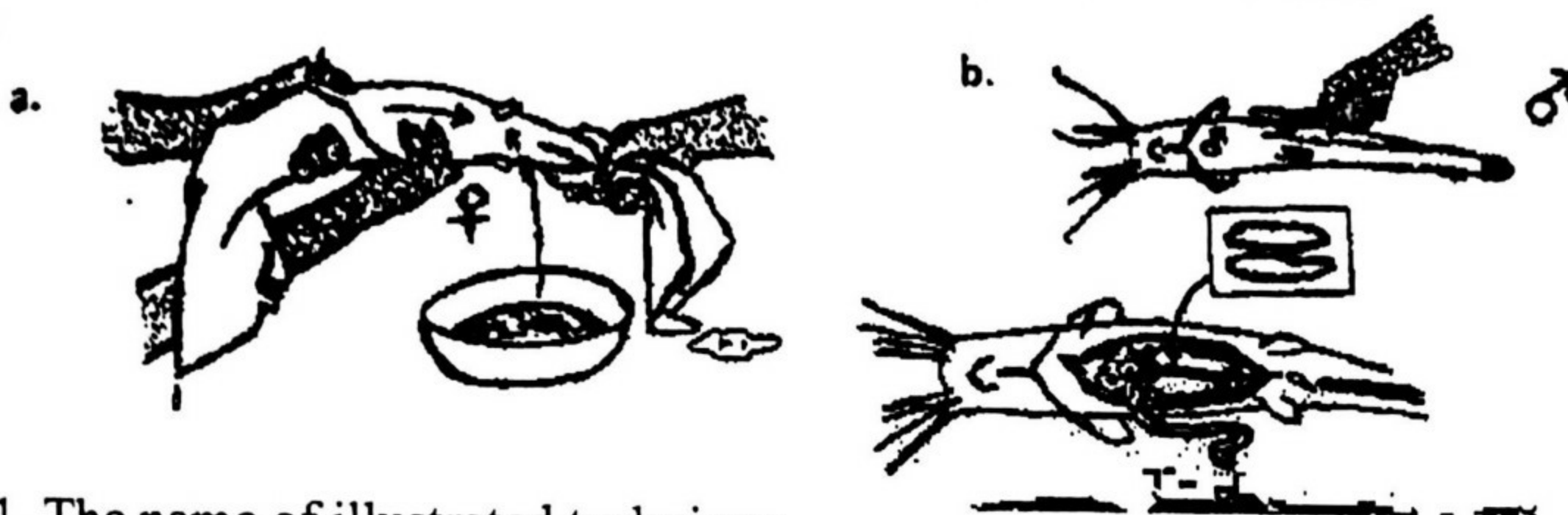
1. Mono and poly culture.
2. Characters of the cultured fish species.
3. General consideration should be taken before site selection of aqua farm.
4. Comment on size, shape and depth of earthen ponds.

II- Discuss the following:

1. Advantages and disadvantages of floating cages.
2. The suitable site to be selected for floating cages.
3. Means of fish transportation for short and long distance.

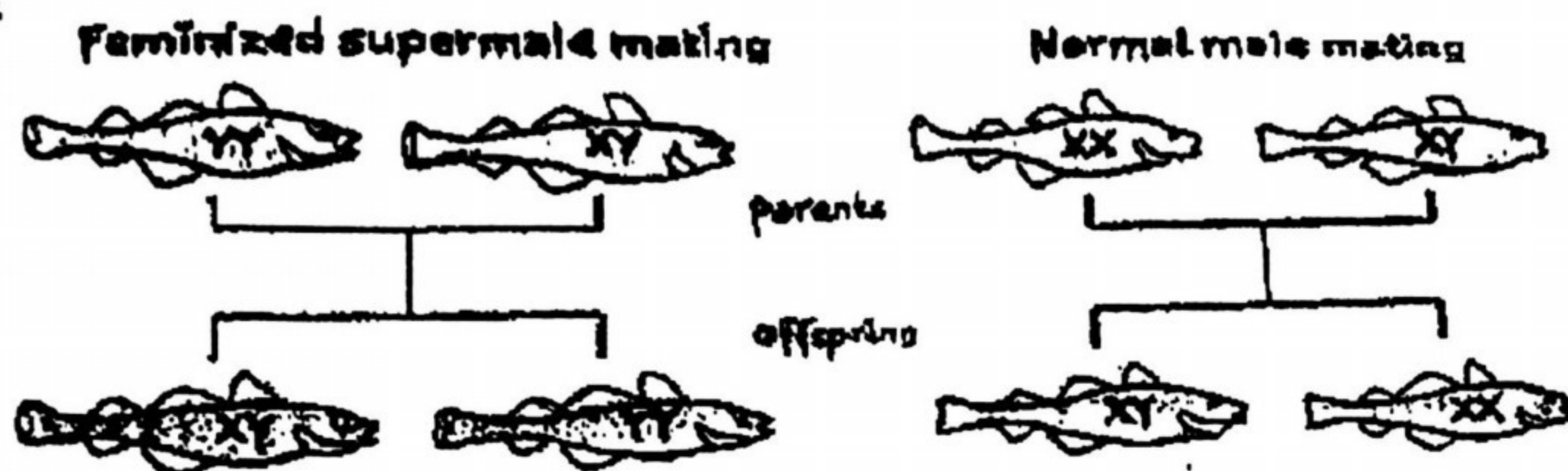
III- Look at the following illustration and answer each points

A.



1. The name of illustrated technique .
2. The species used.
3. Explain the process illustrated in (a) and (b).

B.



1. The name of illustrated technique.
2. Mention reasons for using this technique.
3. Explain the technique illustrated.

C.

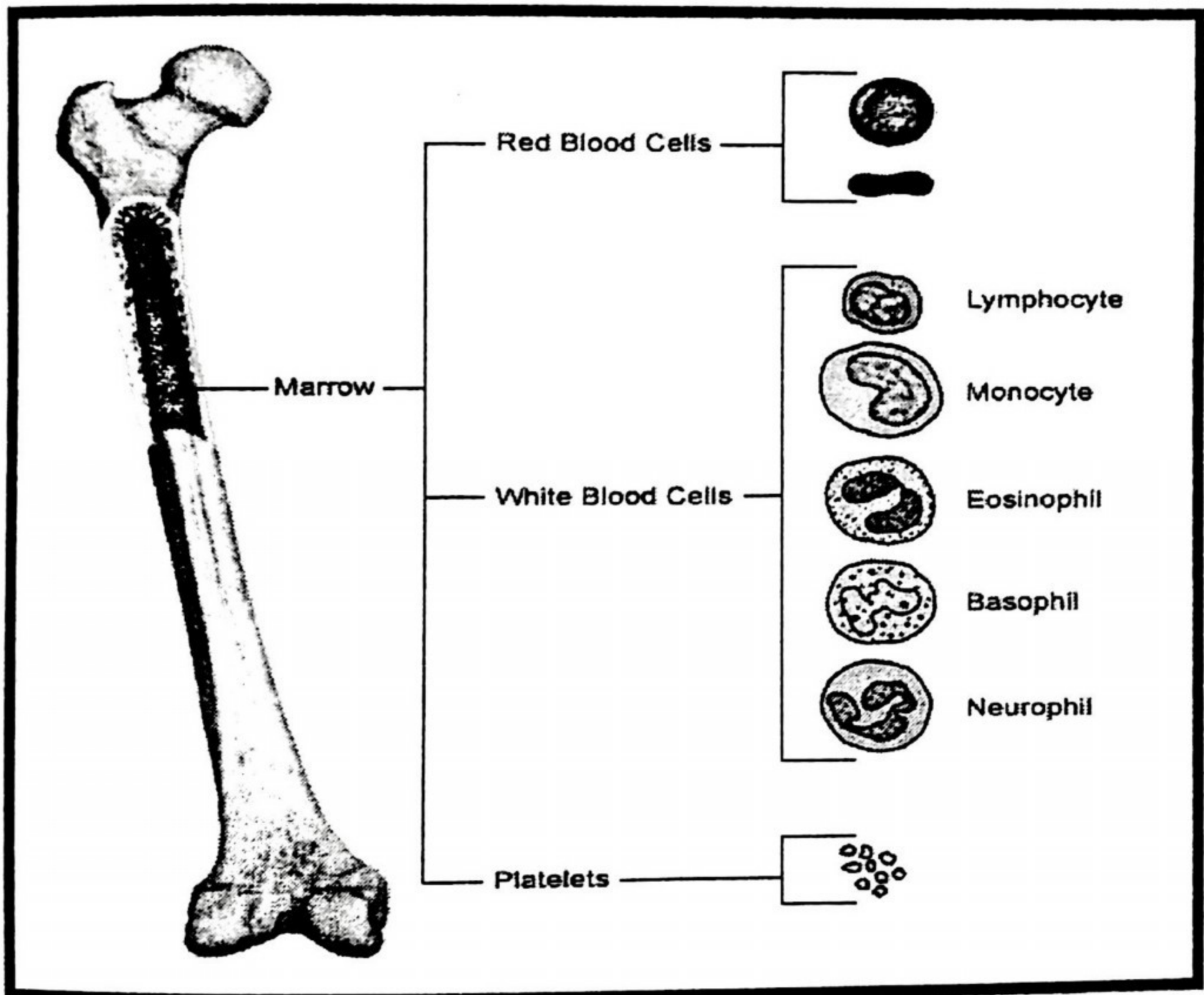
1. Mention of methods of preservation.
2. The dosage of recommendation for male and female.
3. Method of administration.



IV. Discuss fully on the followings statement:

1. Silver carp and tilapia considered as filter feeder's however the filtering mechanism is different.
2. The best utilization of Chinese carp can be achieved through polyculture system.
3. Different method can be used to induce spawning in sea bream.
4. There is in need to induce spawning in tilapia fish.
5. Chemical control of pond aquatic weeds and algac.
6. Destocking of fish eggs.

Clinical Pathology



Clinical Pathology 2006

Answer the following questions:

1-Give an account on:

- a- Laboratory finding of sickle cell anemia.
- b- Anemia of chronic inflammatory disease not response to hematinies treatment until removes the causes.
- c- Anemia characterized by a shift to right.
- d- Leukemia characterized by chronic blood loss anemia.

2-Write short notes about:

- a-Erythremic myelosis and regenerative anemia.
- b-A leukemic leukemia and degenerative shift to left.
- c-Pelger_ huet anomaly and slight regenerative shift to left.
- May_ heggia anomaly and dohle bodies.

3- Write full account about:

- a- Derkocytes , Keratocytes , Codocytes , spur Schistocytes and Echinocytes.
- b- Binzare neutrophils.
- c- Primary macroglobulinemia.
- d- Methemoglobinemia.

4- Comment briefly on:

- a-Thrombophilia
 - b-Haemostatic profiles in dogs suffering from exocrine bile insufficiency.
- Expect haemostatic profiles in cat suffering from septicemia.

Clinical Pathology 2007

Please answer the following questions:

1- Write short notes about: (7 marks)

- a- Anemia in horse suffers from hereditary spherocytosis .
- b- Anemia in dog suffers from lead toxicity.
- c- Anemia characterized by increase metarubricyte with absence sign of regenerative.
- d- Inappropriate secondary erythrocytosis.

2- Write full account about: (6 marks)

- a-Leukocyte response.
- b- Acute leukemia of M3,M5, and M7.
- c- Common laboratory finding in multiple myeloma.

3- Comment briefly on:

- a-Recurrent venous thrombosis in dog.
- b-Hemostatic profiles in cat suffers from waterfalin toxicity.
- c- Primary macroglobulinemia.
- d- Expected hemostatic profiles in dog suffering from snake bite.

4- Give an account on:

- a-Erythrocytes refractile bodies.
- b- Unstable hemoglobin.
- c-Tear drop cell and helmet cell.
- d- Laboratory diagnosis of bone marrow cellularity.

Clinical Pathology 2008

1- write short notes about :

- a. cytokines regulation hemopoiesis
- b. anemia in dog suffering from glucose 6-phosphate deficiency
- c. anemia in dog suffers from copper deficiency .
- d. Cooley's anemia .

2- write full account about :

- a. general alteration in the bone marrow in leucopenia .
- b. morphological alteration of neutrophils (hereditary disorders).
- c. stress and inflammatory leukogram

3- Comment briefly on:

- a. haemostatic profiles in dog suffer from hyperactivity of adrenal cortex .
- b. hemostatic profiles in cat suffer from liver diseases .
- c. hereditary deficiency of coagulation factors inhibitor in cat .

4- give an account on :

- a. abnormalities in morphology of erythrocytes from alteration in cytoskeleton cell membrane .
- b. hemoglobin barts .
- c. significant important of reticulocytes .
- d. theories and interpretation of ESR.



Clinical Pathology 2009

A) Female dog 6 years old had been symptoms of fever over a period of 6 days, pallor, and no significant physical findings were noted.

Erythrocytes

RBC	$3.41 \times 10^3/\mu\text{L}$	L
Hb	$5.8/\mu\text{L}$	L
PCV	20.2 %	L
MCV	59.2 fL	L
MCH	17.0 pg	
MCHC	28.1 g/dL	L
Platelets	301×10^3	

Leukocytes

WBC	$41.2 \times 10^3/\mu\text{L}$	H
N. segmented	49 %	H
N. band	10 %	H
N. meta.	8 %	H
N. myelo.	12 %	H
Lymphocytes	14 %	
Eosinophils	2 %	
Basophils	1 %	
Monocytes	4 %	

Write in details about:

- 1- Interpret the erythrogram data.
- 2- Interpret the leukogram data.
- 3- What is the most likely diagnosis?
- 4- What further laboratory studies, if any, are indicated?

B) Write what do you know about:

- 1- Erythrocyte hydrocytosis.
- 2- Cytokines regulation of erythropoiesis.
- 3- Megaloblastoid cell.
- 4- Primary macroglobulinemia.

C) Write short notes about:

- 1- Anemia in cattle suffers from hypophosphatemia.
- 2- Bizare neutrophils.
- 3- Leukogram in dog with hyperactivity of adrenal-cortical gland.
- 4- Hemoglobin disease.

D) Discuss briefly:

- 1- Recurrent venous thrombo embolism in cat.
- 2- Laboratory diagnosis of hemophilis B in dog.
- 3- Laboratory finding in dog has incompatible blood transfusions.
- 4- Expected laboratory finding in thrombocytopenia and thrombocythemia.



A) A 15 year old mare has pallor and yellow mucous membrane no significant physical findings were noted.

Erythrocytes

RBC	$2.95 \times 10^3/\mu\text{L}$	L
Hb	7.9/dL	L
PCV	24.2%	L
MCV	82.0 fL	
MCH	26.7 pg	
MCHC	32.1 g/dL	
Platelets	321×10^3	

Leukocytes

WBC	$15.1 \times 10^3/\mu\text{L}$
N. segmented	51 %
Lymphocytes	40 %
Monocytes	6 %
Esinophils	2 %
Basophils	1 %

H
H

Results of the blood chemistry were:

Total bilirubin	1.42	H
Total protein	8.21	

Write in details about:

- 1- Interpret the hematological data.
- 2- What is the most likely diagnosis?
- 3- What further laboratory studies, if any, are indicated?
- 4- When taking blood sample from the animal, the coagulation time more than 25 minutes(H). You perform a coagulation panel on the animal with the following results: PT19sec.(H), APTT 38sec. (H), FDP < 10ug/ml., Interpret these results.

B) Write what do you know bout:

- 1- Erythrocyte refractile bodies in cats.
- 2- Cytokines regulation of leucopoiesis.
- 3- Pathological hemoglobin of hereditary disorders.

C) Write short notes about laboratory diagnosis of:

- 1- Anemia in cattle suffers from copper toxicity.
- 2- Anemia in dog has erythrocytes punctuate basophilia.
- 3- A leukemic leukemia.

D) Discuss briefly:

- 1- Atypical erythrocytosis.
- 2- Erythrocytes myeloproliferative disorders.
- 3- Hemostatic profile in dog has splenomegaly.
- 4- Hemostatic profile in cat has excessive vascular damage.



Clinical Pathology 2011

A) Dog 6 year submitted to our clinic , pale , body loss, had been upper respiratory infections with fever, nausea, for several days prior to admission.

Erythrocytes

RBC	$2.85 \times 10^3 / \mu\text{L}$	L
Hb	7.4 g/dL	L
PCV	21.2 %	L
MCV	74.3 fL	
MCH	22.4 pg	
MCHC	34.1 %	
Platelets	$325 \times 10^3 / \mu\text{L}$	

Leukocytes

WBC	$35.6 \times 10^3 / \mu\text{L}$	H
N seg	44 %	H
N band	12	H
N meta	8	H
N myelo	4	H
N myelo	4	H
Lymphocytes	28	H
Monocytes	4	
Esinophils	2	
Basophils	0	

Results of the blood smear exam were:

Immature leukocytes are normal shape and size

1- Write in details about:

- Interpret the erythrogram data?
- Interpret the leukogram data?
- What is the most likely diagnosis?
- What further laboratory studies, if any are indicated?

2. Write short notes about laboratories diagnosis of:

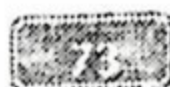
- Different types of AL.
- CGL.
- Primary absolute erythrocytosis.

3. Write what do you know about:

- Negative and positive regulation of erythropoiesis.
- Spur cell and helmet cell.
- Erythrocytes refractile bodies in cat.

4. Discuss briefly:

- Hemostatic profile in patient receives oral antibiotics.
- How to evaluate fibrinolytic system.
- Expected hemostatic profiles in selected diseases.



Question (1)

A- Calculate the red cell indices if :

- PCV 30%

- HB 7 g/dl

- RBC 4×10^6 /ul

B- if normal values of :

- MCV (60-70)

- MCH (20-30)

- MCHC (32-36)

Give your interpretation.

Question (2)

By laboratory means how can you differentiate between:

- a- Regenerative and degenerative shift to left.
- b- True and pseudomacrocytic anemia.
- c- Leukomoid reaction and granulocytic leukemia.
- d- Appropriate and inappropriate secondary erythrocytosis.
- e- May-Hegglin anomaly and toxic neutrophil.
- f- Thrombocytopenia and thrombocytopathy.

Question (3)

Define and give the diagnostic significance of:

- a) Shift to right.
- b) Reticulocytosis.
- c) Heinz bodies.
- d) Pancytopenia.
- e) Dohle bodies.
- f) Eosinophilia.

Question (4)

By laboratory tests (BT, Platelet count, APTT, PT, FDP)

Give the hemostatic results of the following cases:-

- a) Warfarin toxicity.
- b) Aspirin treatment.
- c) DIC.
- d) Defect in factor V11.
- e) Von Willebrand disease.
- f) Hemophilia A.

Clinical Pathology 2013

Question (1):

7 years old, male dog was presented in ability to rise and labored breathing. A physical examination revealed hyperpnoea, cyanosis, cold extremities and palpable abdominal mass.

* Erythrocytes

RBC	$2.71 \times 10^3 / \mu$	L
Hb	7.41 g/dL	L
PCV	24.8	L
MCV	104.7 fL	H
MCH	27.3 pg	
MCHC	29.1 g/dL	L

Leukocytes

WBC	$16.8 \times 10^3 \mu\text{L}$	H
Neutrophils	83 %	H
Lymphocytes	9	L
Monocytes	8	H
Eosinophils	0	L
Basophils	0	
Platelets	$285 \times 10^3 \mu\text{L}$	

Interpret the hematological data?

What further laboratory studies, if any, are indicated?

What is the most likely diagnosis?

Question (2): How can you differentiate between:

- Regenerative and degenerative shift to left.
- Different types of acute leukemia.
- Appropriate and Inappropriate secondary erythrocytosis.

Question (3): What do you know about:

- Pathogenesis and laboratory finding of anemia in case of lead toxicity.
- Primary macroglobulinemia.
- Thrombophilia and thrombocythemia.

Question (4): Give an account on:

- Hb C and protein C.
- Spur cell and echinocytes.
- NRBCs and its significance in cat.
- Laboratory findings of warfarin toxicity.

Clinical Pathology 2014

Question (1):

Male Dog 6 years old, Symptoms of pale, body loss and moderate splenomegaly were noted.

* Erythrocytes

RBC	2.8x10 ⁶ /μ	L
Hb	7.4 g/dL	L
PCV	20.2 %	L
MCV	74.3 fl	
MCH	22.4 pg	
MCHC	34.1 g/dL	

* Leukocytes

WBC	95.2x10 ³ μL	H
N seg	50 %	H
N band	15 %	H
N meta	12 %	H
N mylo	18 %	H
Lymphocytes	4 %	
Monocytes	1 %	
Esinophils	0 %	
Basophils	0 %	
Platelets	91 x10 ³ μL	L

Interpret the hematological data?

What further laboratory studies, if any, are indicated?

What is the most likely diagnosis?

II- How can you differentiate between:

- 1-May – Hegglin anomaly and toxic neutrophil.
- 2-Relative and absolute erythrocytosis.
- 3-True and pseudo macrocytic anemia.

III- What do you know about:

- 1-Diagnostic importance of Bence Jones protein in urine.
- 2-Pathogenesis & laboratory finding of anemia in dog suffered from lead toxicity.
- 3-Thrombocytopathy and antithrombin III.

IV- Give an account on :

- a) General alteration of bone marrow in leukopenia.
- b) What your diagnosis if the hemostatic test result:

Platelet count : N BT:N APTT:I PT:I FDP:N
(N: Normal I: Increase)

- c) Cooley's anemia.





First Term, January, 2015

Time Allowed 2 Hours

Please answer all questions:

Question (I):

(7 marks)

Male dog 6 years old, seen pale, but otherwise his physical exam was within normal limits.

Erythrocytes		
RBC	$1.96 \times 10^6 / \mu\text{L}$	L
Hb	6.7 g/dL	L
PCV	19.3 %	L
MCV	98.4 fL	H
MCH	22.4 pg	
MCHC	34.1 %	
Leukocytes		
WBC	$5.2 \times 10^3 / \mu\text{L}$	L
N seg.	45%	L
Lymphocytes	34%	
Monocytes	6 %	
Eosinophils	4%	
Basophils	1%	
Platelets	$130 \times 10^3 / \mu\text{L}$	L

Interpret the hematological data?

What further laboratory studies, if any, are indicated?

What is the most likely diagnosis?

If the hemostatic screening tests showed the following results: BT (I), PT (I), APTT (I), FDP

(I) interpret these results. (I: Increase)

Question (II):

Discuss briefly:

(6 marks)

- Differential diagnosis of different types of acute leukemia.
- Causes of low serum iron level in chronic inflammatory disease.
- Leukocyte picture in dog treated with glucocorticoid.

Question (III):

What do you know about:

(6 marks)

- Hereditary deficiency of Protein C.

b) Pathogenesis and laboratory finding of anemia in cattle suffered from post-parturient hypophosphatemia.

c) Erythremic Myelosis.

Question (IV):

Give an account on:

(6 marks)

a) Diagnostic importance of

- Toxic neutrophil.

- Reticulocytes.

b) Expected hemostatic test results in case of Hemophilia A.

c) ER bodies in cat.

"GOOD LUCK"